Landscapes of Gender in Archaeology:

Theory, discourse, practice

by

Cherrie De Leiuen

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ABSTRACT

This thesis is about the impact of gender studies in archaeology. It examines how the discipline has engaged with gender theories, and how such theories manifest in archaeological praxis. It undertakes an analysis of gender and language, adapting and applying the methods of corpus linguistics to research articles of six prominent archaeological journals over six decades. The aim is to identify what gender theory looks like in archaeological research, and to evaluate its conceptual efficacy. This is important in a broad sense, as the value archaeology places on gender creates a legacy which affects the perception and understanding of men and women in both the past and in contemporary practice.

This thesis fills a gap in knowledge about gender theory. Despite decades of gender research across academia, there is no study that has assessed the growth or decline of gender in archaeology, or its uptake in publication or practice. It provides an original analysis, tailoring methods from corpus linguistics to correlate gender, archaeology and language. It also considers how hegemonic gender has come to exist—how it has been studied, compared, understood, discussed, and applied. This thesis also assesses whether or not the gender 'argument' has developed and evolved in archaeology, and if, in its current paradigm, has reached its limits. While a goal of this study is to consider where and how gender is used in archaeology, a more fundamental question is: why study gender?

This study is unique in its examination of keyword frequencies, collocates and concordances extracted from archaeological research articles. This data evidences the ways in which producers of texts have adopted the concept of 'gender', and the extent to which this representation has changed over time, before and after the advent of feminism, and across journals. The results of the study are thus lexical in nature, and both genre-related and time-related. Analysing words (or their absence) occurring repetitively and naturally in texts is strong evidence for an underlying hegemony about gender. This is significant because gender bias and power asymmetries in the present have become increasingly nuanced. In addition, there is a palpable notion that gender has become commonplace and almost ubiquitous within social archaeology. The study proves there has been little inclusion of gender theories in the vast majority of the 4784 articles or 33,268,048 words in the six journals examined. The results show that there has been little inclusion of gender theories in the vast majority of the articles examined. In fact, it is arguable whether or not there

has been an impact at all. If so, it is certainly marginal and inconsistent, and does not permeate the overarching archaeological discourses. That is not to say gender theories have not been used, developed and advocated, but such papers are produced by a small sample of people who spend time focused on the topic of gender. The decades of solid and articulate arguments for changing how gender is understood and applied in the discipline have resulted in very small shifts. The underlying hegemonic principles are still there and stronger than ever.

DECLARATION

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Cherrie De Leiuen

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CHAPTER ONE

INTRODUCTION

This thesis is about gender in archaeology. In 1984, Meg Conkey and Janet Spector published 'Archaeology and the Study of Gender'. In this seminal work, they argued that archaeological research and theory had neglected the study of both women and gender, and instead relied on gender stereotypes from androcentric perspectives. At the crux of their criticisms were feminist observations: that this neglect had produced a largely 'womanless' past, and that sexism plagued much of the method and theory that had been produced in archaeology. Conkey and Spector (1984:3) posed several serious challenges to archaeologists, not the least of which was to gain an awareness of their own underlying assumptions, as well as to 'bring the subject of gender into the domain of archaeological discourse'. More than thirty years have passed since Conkey and Spector's article calling for a more compelling archaeology, one with gender as part of critical theory, methods and research goals. The question now is, has archaeology changed? And if so, to what extent? Has 'gender' transformed, reformed or improved archaeological discourses?

This thesis is not about an absence of women, nor the sexism of men, in archaeology. It is concerned with how unexamined gender stereotyping has a subterranean potency; how this affects the way archaeologists think (and write), and how this manifests in archaeological praxis. The aim of this study is twofold; first, to identify what gender looks like in archaeological research, and second, to evaluate its conceptual efficacy. These issues are important in a broad sense, as the value that archaeology places on gender creates a legacy that affects the perception and understanding of men and women both in the past and in contemporary practice. In addition, I consider the issue of how hegemonic gender has come to exist—how it has been studied, compared, understood, discussed, and applied. I assess whether or not the gender 'argument' has

developed and evolved in archaeology, and if, in its current paradigm, it has reached its limits. While a goal of this study is to consider where and how gender is used in archaeology, perhaps a more basic question is: why study gender? As such, this research is firmly framed within the mould of early gender studies in archaeology, but the analysis and methods used are unique and contribute new knowledge to how the discipline of archaeology has engaged with gender theories.

This thesis is both timely and necessary, given the new wave of misogyny set in motion by recent socio-political events in countries such as Australia and the United States. Situating gender studies within broader theoretical contexts is thus a critical component of this thesis, requiring more than a standard literature review. An exploration of the major research ideas and exponents then explicates how and why gender is important, and what gender does, and enacts, as a form of praxis. This component of the thesis is also the basis for a methodology that correlates language, gender and archaeology.

In order to 'measure' the ways that gender is conceptualized and discussed in archaeology, I have adapted and tailored established methods of corpus linguistics, (as outlined by Baker 2010, 2014, Baker and McEnery 2015, and Scott 1997 amongst others), and applied them to a large body of archaeological text—33,268,048 words from 4784 research articles—across a range of journals, and over their lifespan. This innovative approach probes for ideological constructions of gender embedded within the structure of archaeological writing via peer-reviewed research articles. The methods enable a dissection of how gendered vocabulary has been used in this substantial sample of archaeological research, and the manner in which gender ideologies and gendered relations of power are produced and reproduced.

1.1 Connecting language, discourse, archaeology, and gender

> In gender archaeology much ink has been spilled on conceptual issues but regrettably little on 'real' archaeological themes. Sure, in historical perspective it was important first to indicate male bias in much archaeological writing, to appreciate the role of female scholars in the history of archaeology, to hint at the centrality of women in prehistory and to establish a rough outline of gender theory.

> But after all this has been said and done ad nauseam, one would really like to see how such gender perspective genuinely enhances and enriches our understanding of the past - assuming at least that such understanding is still one of archaeology's major ambitions even in a feminized age. (van Reybrouck 1998:88)

> It is utterly laudable to wish to do away with the sexism inherent in much traditional archaeology, to make people more aware of the presence and importance of women in past societies, and to produce studies focusing on women in different periods. However, in swinging away from past androcentrism, the pendulum is in danger of going to the other extreme; sexism rubs both ways. As Albert Camus once wrote, "the slave begins by demanding justice and ends by wanting to wear a crown. He must dominate in his turn". (Bahn 2000:87)

The quotes cited above from David van Reybrouck and Paul Bahn typify a wider trend that emerged in the mid 1990s, one that has been characterised by some as 'anti-feminist intellectual harassment' (Kolodny 1998:105; Romito 2005:41). Bahn's irony regarding sexism, in particular, exemplifies 'an attempt to reassert the power of masculinity deemed to have been lost by the concessions made to feminism' (Benwell 2007:540). These quotes serve as a starting point in identifying the range of discourses on gender and discursive choices across archaeological text, by identifying one type of reaction to archaeologists like Conkey and Spector who first challenged sexism and raised the concept of gender in archaeology. Quotes such as these, which can be characterised as having an obvious anti-feminist/women/gender rhetoric, are uncommon, but subtler and indirect sexism is more pernicious, as it is difficult to identify, 'unpick' and respond to. Geller (2016) sees present-day archaeologists' practices in terms of both subtle and overt sexism that is pervasive because it is intersectional, contextual, and complex. The research presented in this thesis employs the use of language (via writing) to 'unpick' discourses on gender, and to provide evidence of the nature and scale of its usage; it also prises apart insidious structural gender biases to reveal their manifestations in archaeological praxis. It exposes and deconstructs discourses, which, rather than make sexist pronunciations, present perspectives on the past as if such positions were gender-neutral and seemingly natural. This research takes as a premise that language is always used for a purpose, and so

people make choices about what to say and how to say it in order to accomplish a particular end. Further, language may be a tool of ideology when it serves to establish, sustain, or transform relations of domination (Fairclough et al. 2011).

In searching for a way to 'measure' the impact of gender in archaeology, an effective medium to investigate is the principal output of archaeologists – their writing. The professional language of a discipline contributes to the creation of an academic culture and establishes what a discipline is 'like'. Certain similarities naturally occur among academics interested in similar questions, and it is precisely these similarities that enable academics to talk to each other and share their knowledge (Bailey 1977). Furthermore, 'disciplinary norms are communicated more through implicit discourse rather than that which is explicitly stated' (Miller and Prentice 1996:799). Through language, in particular academic writing, some ideologies, like gender, may become dominant and authoritative, so that one ideology is privileged over others, which are then marginalised or displaced (Bleakley et al. 2011). A hypothesis upon which the methods are based is the concept of 'aboutness': topics which become more or less important over time, will be discussed more or less frequently. Becher and Trowler (2001) propose that linguistic analysis in disciplinary contexts may provide meaningful information on both the cultural features and knowledge implied in a disciplinary community. Feminist scholars across the social sciences, such as Cameron (1998, 2003), have extended the study of ideology and language to examine where and why empirical 'gaps' around gender come to be created, and how 'existing paradigms systematically ignore or erase the significance of women's experiences and the organization of gender' (Thorne and Stacey 1993:168). In this sense, it is feasible that the analysis of a suitably robust sample of archaeological research will allow deductions about how gender is regarded and used by the archaeological community.

Much of the work in the field of gender, language and ideology is underpinned by French post-structuralist feminist theory, which evolved in the 1970s and was led by scholars such as Cixous, Irigaray, and Kristeva (see Marks and de Courtivron 1980).

Through two principal strands of thought, linguistic and materialist feminisms, these feminists emphasised language as a tool of women's oppression, and sought to prove an innate androcentric bias in the way language is constructed and used (Cavallaro 2003; Moi 1987). Linguistic feminism focuses on the impact of symbolic representations of gender on the psyche, and particularly how language fashions and encultures individuals and collectives, thereby maintaining cultural codes and conventions (Cavallaro 2003:xvi). In contrast, materialist feminism ascribes to the notion that gender is fashioned by patriarchal and social institutions (Cavallaro 2003:74). Weatherall (2002:75) has noted a more recent shift in feminist research from a focus on gendered language per se to one on discourse and gender, with a focus on power. Although French post-structuralist feminism is not explicitly addressed in this thesis, its influence is acknowledged and a blending of both materialist and linguistic strands of feminist thought are implicit, particularly in the views that:

a) gender archetypes are based in an historical and androcentric science;
b) language, and in particular discourses, shape our experience of what is 'real';
c) institutions and material culture shape gender; and
d) the way we speak and write reflects the structures of power in our society (Lather 1991:25).

In examining the notion of language and gender in archaeology, it is important to define and delineate the use of the term discourse in this thesis. Discourse is understood as a social practice, as the production of knowledge through language (Hall 1992:291). Foucault's (1980) and Link's (1983) views of discourses as historically contingent cultural systems of knowledge, belief, and power are relied upon in this study. A central idea used throughout is also that the surface phenomena of a text (i.e. words) are manifestations of deeper underlying semantic relations; in this way, discourse is both language and practice (Taylor 2013:72). Discourses comprise actions, interactions, values, beliefs, feelings, non-linguistic symbols, clothes, tools, objects and the dimensions of time and place (Gee 2011:46). They do the work of defining, constituting,

and positioning human subjects, often in hierarchies or social categories, such as race, gender, and class, that have material effects on people (Stoddart 2007). Dominating discourses have the effect of marginalising other discourses while making themselves appear self-evidently transparent (Bleakley et al. 2011), and it is in this way that discourses operate oppressively (Kumashiro 2000:40).

A discourse is gendered when messages about gender categorisations are superimposed on the basic content of a discourse (Eckert and McConnell-Ginet 2004:254), i.e. when the discourse is about the nature, representation or construction of women and men and their positioning as subjects. According to Sunderland (2006:54) gendered discourses often position women unfavourably and adhere in their content to male dominance. Conkey (1997:58) argued that '...gender assertions are made regularly in interpretations. Often these assertions are so implicit that archaeologists don't really "see" them as specific ideas that need to be confirmed or tested.' The conceptual 'lenses' through which archaeologists 'see' gender roles, interactions, and material culture are socially constructed, and are fundamentally reflective of dominant sociocultural ideologies and hegemonic discourses. Interrogating discourse is thus a useful strategy in attempting to remediate and elucidate oppressive practices.

The 2007 volume of the *Journal of Archaeological Method and Theory* was a major influence on the methods that were devised for this thesis. In her paper in this volume, Conkey reviewed the contents of four Readers of Archaeological Theory in order to consider how the discipline considered feminist theory in significant works. In the same volume, Engelstad (2007) raised the issue of language and themes of gender and feminism in what are considered to be 'mainstream' archaeological theory texts. Engelstad also discussed the usefulness of citation studies which (in a short study of eight books) showed that much work on gender was self-referential and had few or no references to feminist critique or theory. While research into gender and publication patterns has studied such wide-ranging issues as the nature of authorship (Bardolph 2014; Colwell-Chanthaponh 2004; Harlow 2011) and citation practices (Beaudry and

White 1994; Hutson 2002), these studies have not assessed gender content across journals. Most relevant here is a study by Back Danielsson (2012), which examined the number of gender themed papers in journals from 1980 to 2012 using the Arts and Humanities Citation Index (ISI) database. Search words used were *gender* and *queer*, and the stems *femini**, *masculin**, *embodi** and *intersectional** to capture a broad range of titles. The results are noteworthy. Back Danielsson showed that gender themed articles accounted for only 2% of the total number of published archaeological articles across 81 journals and that this percentage had increased only marginally across decades. Her results demonstrated that, despite the fact that the total number of articles within archaeological research has increased, the number of gender articles remains consistently low. Tomášková (2011) later examined the prevalence of gender in journals, but this study was limited to the analysis of gender and feminist terms in their titles, abstracts or keywords. In terms of theory, a study by Waterton et al. (2006) applied CDA, and specifically the work of Fairclough (1995), to understand the implications of discourse in terms the Burra Charter and heritage. Similarly, Preucel (2006) addressed language and semiotics and Joyce (2002) the language of the discipline and from a feminist standpoint, but neither of these studies were specifically about gender, and were limited in scope to the concepts of ideology, narration, and interpretation in archaeological discourses. There is no body of work that had applied linguistic techniques to investigate and correlate language and gender in archaeology. Whilst underscoring important and influential work in the area, such studies fail to address the nature and extent of the 'transformative' aspect of gender archaeology. This study aims to fill this gap.

1.2 Rationale and research questions

In a 2003 paper Conkey asserted that, despite an 'explosive' amount of work in gender archaeology, such research was still 'relatively ghettoized', mostly about women, by women, reduced to specialist publications, or included as 'token' articles or chapters about women. Denning (2000:214) similarly believed that gender archaeology was merely a 'discrete subcategory of the discipline' and had 'neutralised the power and politics of a feminist approach'. Engelstad (2007:219) also asserted that, 'despite the

significant gains in engendering research and practice, gender archaeology is at risk of becoming a narrow specialty with little left of its initial critical feminist and theoretical edge.' However, there was also a conflicting undercurrent in the literature that suggested work in the area of gender had grown to become commonplace, almost ubiquitous, especially within social archaeology. Various précis of work in the area used terms such as 'outpouring', 'deluge', 'flood', and 'explosion', even 'vigorous' (for example, Finlay 2013; Gilchrist 1999; Hadley and Hemer 2014; Solometo and Moss 2013). Gender archaeology was also described as both 'popular' and a 'trend' (see, for example, Johnson 2010; Nordbladh and Yates 1990), for example:

> … the shelves of most libraries are bending under the weight of anthropological and archaeological books, articles, and journals devoted to the study of gender. (Fesler 2004:179)
>
> … articles on gender now number in the hundreds. (Díaz-Andreu 2007:13)
>
> Having surrounded myself with available books and various reports that address gender as a central issue, I quickly came to a startling realization. In the last 20 years archaeological gender research has multiplied exponentially and has gone global. Stacks of books dealing with every geographic region piled next to me. It would be difficult these days to start an article with the claim that gender is a neglected or an unknown topic, as was the case in the 1980s. (Tomášková 2011:111)
>
> … archaeologists have published a plethora of articles, edited volumes, and single-authored books that use feminist approaches to decode stereotypes and problematize issues of gender looking into the past. (Cantwell and Wall 2011:123)

These observations seem to be amplifications of the scale of the body of work. There is no disputing that there is already a body of work on gender in archaeology. In many archaeological workplaces there is less sexism, with greater employment equity for women occurring in the last decade in many Western settings (Brondo et al 2009; Mate and Ulm 2016; Ulm et al. 2013). Substantive research has been directed into gender and funding grants (Bowman and Ulm 2009) or gender and academic promotion (Smith and Burke 2006), and there are many papers on the status of women in archaeology (for example, Balme and Beck 1995; Bardolph 2014; Casey et al 1998; Claasen 1994; du Cros

and Smith 1993; Harlow 2011; Hamilton et al 2007; Nelson et al. 1994; Walde and Willows 1991; Williams 1991; Wright 2008). There is also a range of reviews, books and edited volumes demonstrating exceptional research contributions in the area (see, for example, Baugher and Spencer-Wood 2010; Bolger 2013; Geller 2009; Gero and Conkey 1991; Nelson 2006, 2007a, 2007b; Rotman 2009; Rotman 2015; Spencer-Wood 2013 and Wright 1996). But it *cannot* be put simply that, because there are more women in archaeology, there must be more interest in gender and writing on gender. Are people actually doing 'gender' archaeology? Or is it that everyone is 'doing' gender, so it has simply been incorporated into archaeological theory and practice and is no longer an issue in itself? Alternatively, has gender evolved to be used as a means of addressing or muting *anything* to do with women in archaeology? It was apparent to me that, while we can 'measure' gender in terms of numbers of women and men in employment or as authors, we cannot point to a detailed study that accurately captures the state or influence of gender theory across research themes and methods.

As a result, this study asks the following questions:

1. What is the impact of gender theories across research themes and methods in archaeology?
2. Has the writing of the discipline changed to include more inclusive, balanced accounts of both women and men of the past, with gender theory permeating discourses?
3. In terms of understanding impact and change,
(a) can the content on gender be quantified and compared to the total amount of content in journals?
(b) has there been an increase or decline in the publication of gender and its related concepts in journals?
(c) if there is a decline in publication, then why?
4. How are the theoretical and analytical insights from feminisms used within archaeological research?

(a) have these insights been adapted to the archaeological discipline, and have they been developed and deepened?

(b) has the concept of gender in archaeology changed over time?

5. When applying a gender framework in a research methodology, does it impact results?

1.3 Scope and parameters of this thesis

This thesis does not examine each and every publication, case study or site that has considered or applied a gendered approach in archaeology. Nor does it simply count the number of papers or monographs on gender archaeology. To do so would not provide any clarity on the question of the wider acceptance or rejection of gender theory across research, as there is no benchmark or basis to compare these outputs with. For example, it is pointless to argue about whether ten (or a hundred) monographs published on gender archaeology is a lot or a little, if the total number of monographs and articles published on archaeology is unknown (and almost impossible to determine). In order to answer the overarching question on the impact of gender archaeology across the discipline, the content produced on gender must be measured as part of a whole. Thus, to provide meaningful data, this study examines all research articles in six representative journals ('the corpus'), and measures the content on gender within those articles.

A major aim of this research is to gain an insight into the construal of gender over time and across these journals. The corpus is thus comprised of research articles from the six journals from their establishment until 2013. The journals *American Antiquity, Historical Archaeology* and *Australian Archaeology* are included, as they are older, established and reputable. Thus their content is able to be examined for any long term change in content prior to and after the emergence of feminism. As such, the articles written prior to the arrival of studies on gender in archaeology in the late 1970s and 1980s form a key part of the study. By including this data, any change in discourse, frequency on gender content and in word use is able to be measured and scrutinised. The influence of feminist discourse from both inside and outside the discipline may then be able to be

discerned. The earliest articles considered in this thesis are those published in *American Antiquity* from 1947 onwards, as this is when gender developed as a concept; articles from 1935 to 1946 were deliberately excluded as these pre-date theories of social gender. This makes it possible to assess the content on women, men, masculinity, femininity and gender, and track any changes in the decades that followed. Was there a shift in discussions of women from the 1960s to the 1970s when feminism arose? If so, then the feminist movement was an influence, rather than the research in archaeology that emerged in the 1970s and 1980s. This is a means of examining incremental change in discourse over time, as well as measuring the impact of gender and feminist theory in the discipline. Measuring only articles written after gender theory had taken root in the discipline would not accurately reflect these longitudinal change and would skew the results.

Furthermore, the data from 1947 to 2013 can be linked to gender theory presented in Chapters Two and Three, as well as the larger history of archaeological thought. This broader theoretical history is critical to understanding the results of the data as a whole. For example, the intellectual interests and foci of archaeologists publishing in the 1950s in *American Antiquity* are likely to be different from those publishing in *Historical Archaeology* in the 1980s. Including these data can 'measure' the ways in which discussion on gender change, evolve or differ in each journal and across sub-disciplinary areas within the broader archaeological umbrella. The corpus—and subsequent analysis— therefore consists of articles written before gender research takes hold (pre-1984) in the three older journals, and articles published in the three more recently established journals (post-1984).

The latest articles considered in this thesis are those published by the end of the year 2013. This was set as a parameter for the analysis from the outset, as data collection and processing were extremely time consuming. It was not possible to continually update the dataset in each subsequent year to 2018, as the gains to be made from such additions would have been incremental at best to the overall requirements of the thesis.

It is also worthwhile pointing out that this study does not include an examination of the sex of the authors of any of these journal articles. Although it is acknowledged that, broadly, most gender and feminist research is undertaken by women, the issue of an author's sex is not within the scope, analysis, or research questions posed in this thesis. To undertake a study on the sex of each author to prove that men write differently to women, or that men dominate archaeological publishing (and thus ignore gender), or that women are interested in different research subjects to men requires an entirely separate method and, indeed, thesis. Further, the idea that women intrinsically write differently to men is in itself a sexist proposition (see Oakley 2011, amongst others). As is the notion that, as more women become archaeologists, then the nature of archaeology changes. Further, studies such as those by Mate and Ulm (2016) show that in in countries such as Australia in the last decade the number of female and male archaeologists is close to parity. The presumption of this thesis is that it requires *both* men and women to have an interest in and pursue gender theories, and it is inherent sexism in the discipline (and wider society), not women, that is the issue. The analysis of journals such as *Australian Archaeology* thus focuses on content, rather than an author's biology.

It is also important to highlight that gender, as a both a social process and a category of analysis, cross cuts theories such as sexuality, identity, race, ethnicity, class, family and kinship. The depth and breadth of literature in these areas is acknowledged but not discussed in major detail in the literature review, as gender is the principal focus of this thesis.

1.4 Methods

This study has two principal lines of investigation: a deep review of the literature on gender in archaeology, and linguistic study of archaeological journal articles, which includes an in depth case study of the methods applied to an historical Australian site.

The language study

The goal of this component of the study is to identify and 'pick out' gendered discourses and, importantly, to identify gender silences. The method cuts across standard research boundaries to give a diachronic perspective of the writing on gender in archaeological texts over a significant period of time. It is both an historical and a cultural analysis of archaeology. However, there is no template or method in archaeology (or elsewhere) for examining the content of such a broad research base in this way. This necessitated an appropriation of research tools from critical discourse analysis (CDA) and, more specifically, corpus linguistics (CL), to interrogate the medium of journal articles. Discourse analysis, and more accurately feminist CDA and CL, inform the key tools used, because the link between gender, power and knowledge is best seen by exploring language-in-use (Hesse-Biber 2014; Lazar 2005).

Many CL analyses are based around the concept of frequencies of particular words or keywords. For the purposes of this investigation, and in order to determine whether gender is a consideration within the selected body of work, each article or text is searched for indicator or 'key' words. Fourteen keywords were selected, chosen specifically because they are commonly associated with the concept of gender. The text of the article(s) is run through the software package *AntConcordance* to count if and where these keywords occur in the text, their frequency, and their percentage of the total number of words. A list of words or a phrase on either side of the keyword—known as concordance lines—is also examined. The patterns of words that co-occur repeatedly (collocation) are used to scrutinise the tendency of words to be biased in the way they co-occur.

The theoretical justification for the adaptation of a 'bottom-up' method in this thesis (see Figure 1) is that people often make subjective judgements about language—we see what we want to see. The function of CL is to lessen personal bias and rely more on the observed use and frequency of terms. CL uses software to study language, so that trends, patterns and frequencies can be ascertained objectively. A hypothesis of

language use can be confirmed or refuted and such analysis also can generate new research questions. It is also advantageous to be able to quantify linguistic patterns and provide more solid conclusions. For example, the statement that 'men are mentioned more frequently in human origin publications' can be proven or refuted, as well as quantified. Baker (2010) suggested that CL could be used to provide a general 'pattern map' of a large volume of data. First, it can provide information on which lexical items appear at a disproportionate frequency compared to a general corpus. Keywords can then be checked for collocations, which may yield additional insights into the preoccupations of the authors. Finally, concordances of interest can be examined closely to verify the context of statements and the linguistic elements involved.

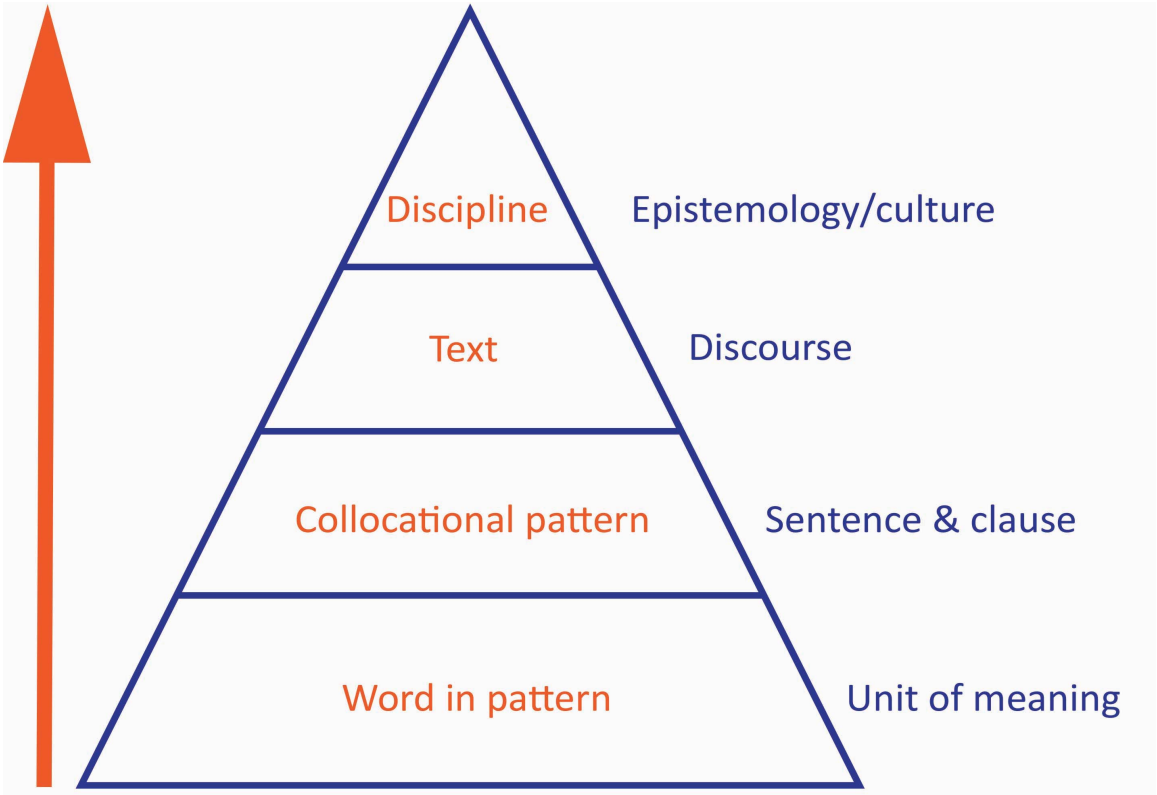

Figure 1: Hierarchy in academic writing. Adapted from Nishina (2010:37)

The current study was framed through the lens of feminist thought to *make more obvious* the overarching narratives about gender in archaeology. Analysing words (or their absence) occurring repetitively and naturally in texts can provide strong evidence

for an underlying hegemony about gender. This is important because gender bias and power asymmetries in the present seem to have become increasingly nuanced. The goal is to trace how gender theories are incorporated into the language of texts: whether changes in the use of particular words tell us anything about the changing context of gender research in archaeology, and how changes in these perceptions have become more or less visible over the past 40 or more years.

Genre

Peer-reviewed journal articles, or research articles, form the core of this study because they are used to communicate new work, build a collective knowledge base, are validated by peers, and define the parameters of proper and accepted discourse (Joyce 2002:7-31). According to Bazerman (1994:104), 'the primary product of most disciplines, and a secondary product of all are published texts, which are taken to constitute the knowledge of the disciplines' (Figure 2).

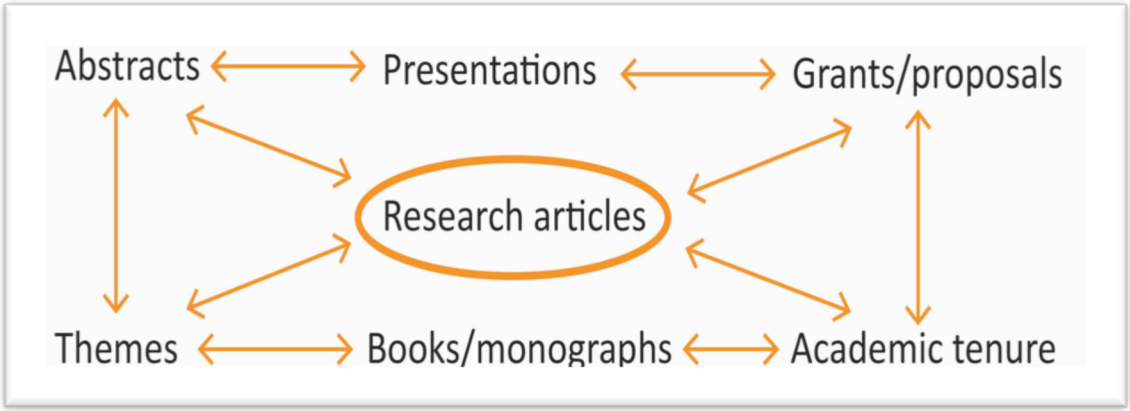

Figure 2: The place of research articles in academic communities. (Adapted from Swales 1990:17 and Nishina 2010:22)

The research in this section is based on a corpus of 4487 journal articles, from the establishment (first issues) of several journals, until 2013. The journals selected are *American Antiquity, Archaeologies*, *Australian Archaeology*, *Historical Archaeology*, *Journal of Social Archaeology* and the *Journal of Archaeological Method and Theory*. Three of these journals (*Historical Archaeology, American Antiquity* and *Australian Archaeology*) were selected because they represent older, established journals and

enable the discourse on gender to be tracked over the long term and compared with newer journals established after the introduction of gender as a concept (*Archaeologies, Journal of Social Archaeology* and *Journal of Archaeological Method and Theory*). These journals are also those that have the highest number of gender themed papers according to Back Danielsson (2012) and Tomášková (2011).

Swales (2004:218) argued that published research articles are also the result of a complex process: they are produced from many drafts reflecting multiple inputs (i.e. advice or comments) from discourse community members, including co-authors, colleagues, reviewers, editors, and supervisors. In addition, it is the publication of results that legitimises ideas and findings and transitions knowledge from private to public; as a result it includes a shift from what could be perceived as personal opinion to something closer to 'truth' (Spender 1989). Moreover, publication serves the academic community at large by adding theories and discoveries to the public discourse and by holding researchers accountable to their data and ideas (Curzan and Queen 2006). The evaluation of peer-reviewed journal content thus serves as a means to investigate knowledge valuation and validation in archaeology, and provide insights into existing narratives. For these reasons, analysing archaeological journals is seen as a viable means to investigate what topics the academic archaeological community deems as having merit, and in turn the value it places on gender in archaeological research.

1.4 Rationale for, and outline of the thesis structure

The title of this study—'Landscapes of gender in archaeology'—was inspired by the case study, the St John's site, a place, like all sites of human activity, which can be seen as a 'gendered landscape'. In a superficial sense, St John's was a gendered landscape in that, at different points in its history, it was occupied only by men, and then only by women. However, in this research, I was more concerned with exploring how the institution(s) built there—a church, presbytery, school, and later a girls' reformatory—all shaped gendered behaviours, and how the faint echoes of power and the performance of idealised gender could be perceived from its remaining materiality. As a physical rendering of social intention, this place was, in effect, a patriarchal landscape, originally

built and designed by and for men, but later repurposed to contain and reform women into their ideals of a feminine gender. At the same time I was considering the ways in which archaeological language was used initially by and for men, but later repurposed by women to fight against the invisibility of women, and how gender appears and disappears in research published in archaeological journals. Not unlike St John's, which was once the centre of a thriving community but has little left on the surface today, the archaeological literature can be seen as a metaphorical landscape with its own geography and institutional norms that can also be excavated. The corpus I have constructed for analysis is one of journal articles, but it is also the site on which I have marked out a terrain: I have mapped it, retrieved data, then cleaned it, processed it and interpreted it, in much the same way as the artefacts and site features from St John's were treated. In this way, a topography of the literature on gender is provided, a literary landscape that complements and informs the study of a physical one. There were clear parallels in both landscapes in the way 'gender' seemed to be nowhere and everywhere simultaneously, and to me this was axiomatic and warranted investigation.

Dudley-Evans (1999:28) terms the typical 'IMRAD' (introduction-methods-results-analysis-discussion) type of thesis as a 'traditional' thesis. However, in answering the research questions posed by this study, the IMRAD model was not the best fit; the questions could not be answered through the study of the archaeology of the St John's site presented alone, nor could a discourse analysis 'flesh out' some of the real methodological concerns. Thompson (1999:37) believes a thesis with a 'complex' internal structure is one that reports on more than one study. Given the complex nature of the research questions, this thesis has an atypical, 'complex' structure. It has two main components or sections, and uses both qualitative and quantitative methods.

Section One: The theoretical landscape

In section one I present a broad and detailed historiography of gender research, how gender and archaeology connect, and a literature review that situates the current study within the existing body of research. This section is longer than a 'standard' literature review, but it is not intended to be a 'laundry list' of work in the area. It must be

emphasised that the purpose of this section is to highlight the depth and breadth of research that has been produced over the past 30 years in order to understand if, where, and how these studies have been used, cited, and applied in the language study that constitutes section two. It provides a basis for determining whether different parts of archaeology have co-opted certain elements of gender theory, but not others. It allows an analysis of whether its topography has changed over the past three decades or whether the same arguments are being made in the same ways.

Chapter Two defines and explains gender. It explains why it is important as part of human identity and social analysis, and outlines the major theoretical paradigms for understanding gender, including feminisms. This chapter sets the terms of reference for the thesis. Without unpacking and dealing with these seminal issues, it is impossible to justify why there is a need to undertake a 'gendered' archaeology.

Chapter Three provides an overview of the major concepts that embed and influence gender epistemologies in archaeology, and considers how they condition attitudes and responses to change. I make explicit the connection between gender and material culture. I demonstrate how and why gender in archaeology is simultaneously self evident and concealed, because gender 'exists' in realms of common knowledge (that is, everyone knows about it); as well as falling outside the paradigms of standard practice (so the term is confused). This chapter explores how gender affects material culture, and the interplay with concepts of symbolism, materiality, agency, performance, heterarchy and object biographies. I connect how complex and intrinsically important gender is to human culture and, in turn, to archaeology.

Chapter Four is a literature review of the major works, contributions and representations of gender theory in archaeology. The key themes in gender archaeology, such as feminism, power, the division of labour, intersectionality, and households are presented, with a focus on historical archaeology in light of the case study in section three.

Section Two: The landscape of discourse

Chapter Five and Six describes the theoretical frameworks used in the language and gender component of this thesis. It defines the CDA, feminist CDA (FCDA), CL and the terms concordance and collocation, given that they are non-archaeological methods and are a hybrid of approaches tailored for archaeology. This chapter explains the methods, the data collection procedures, and the data analysis principles. It describes the processes used to create the data, the 'corpus'.

Chapter Seven forms the core of this study, providing the results and analysis of the language investigation. It first provides the results obtained for each of the journals, the 'macro scale', and beginning with an overview of the results of the keyword study. Second, each journal is considered individually with both a keyword analysis, which brings to the surface evidence of the context of how the words are used in the article(s). Then moving to the 'micro-scale', and then identifies key trends in collocations, examining the terms that are commonly used in relation to those key words, for example, which words usually co-occur with 'women' or 'masculine', and where pertinent, concordance lines are explored. The results are presented in either figures, tables or word clouds, each selected to best represent the results, rather than a single format one-size-fits-all graph.

It then provides the case study of the St John's Catholic presbytery and church. In brief, these methods combine an examination of historical accounts, documents, structures and artefacts. This process takes both a pragmatic, 'functionally' based approach to analysis in order to understand what activities were being performed at this site and also applies the insights gained from the results and 'gaps' identified in the linguistic study and applies them to the published results of the work on the St John's site.

Chapter Eight presents the overall analysis. It brings together the defining concepts, literature review, the results of the language study and the case study. The conclusion examines how each of the preceding aspects of the research answers the questions posed. This chapter highlights the pervasive gender biases and assumptions in the

epistemologies of archaeology, elucidating where change has occurred, where biases and silences remain, where improvements need to be made, and the contributions that could be made by further research.

SECTION ONE

THE THEORETICAL LANDSCAPE

CHAPTER TWO

SITUATING GENDER

This chapter defines sex and gender and discusses the boundaries between the two. It sets the terms of reference for this thesis. Researchers such as Lorber (1996, 2005) have challenged academics to carefully reconsider the ways that both terms are used in research. This involves an important first step: describing and understanding the difference between the concepts. The way sex and gender are conceptualised has implications for all aspects of archaeological research, including methodological approaches, data collection procedures, and analytical techniques.

2.1 Sex and Gender: Either, Neither or Both?

The term 'sex' refers to the biological basis of differences between males and females and encapsulates the anatomical, physiological, genetic, and hormonal variation that exists in species (Johnson and Repta 2012:19). There are a number of indicators of biological sex, including sex chromosomes, gonads, internal reproductive organs, and external genitalia (American Psychological Association 2011). Knowledge and understanding of sex changed subsequent to the discovery of sex determination by chromosomes by Nettie Stevens (see Brush 1978), and with the development of modern genetics and the evolution of technologies (Moody 2007:xvii). Sex was believed to be determined by the chromosomal arrangements XX and XY as the typical makeup for women and men respectively. It is now understood that chromosomal configurations XXX, XXY, XYY, and XO exist, as well as XX males and XY females (de la Chapelle 1981; McPhaul 2002). Sex affects health, chromosomal compositions, variation in body shape and size, metabolism, hormonal and biochemical profiles, fat and muscle distribution, organ function, and brain structure, among other physical traits (Clow et al. 2009; Johnson et al. 2007).

While biological sex can be defined and understood with relative clarity, gender is a contested term. The English-language distinction between the words sex and gender and their usage developed in the 1960s (Haig 2004:92). This was prompted by the emergence of feminism. Prior to this, sex and gender were transposable concepts, for example in 1926, Fowler's *Modern English Usage* (1926:221) stated that 'gender...is a grammatical term only. To talk of persons or creatures of the masculine or feminine g[ender], meaning of the male or female sex, is either a jocularity (permissible or not according to context) or a blunder.' The specific study of women or men was also limited. The last three decades of the twentieth century saw much debate on the meaning of gender (Butler 1990; Delphy 1993; Ortner and Whitehead 1981; Rosaldo and Lamphere 1974; Rubin 1975), and as the debate progressed, a distinction between biological sex and social gender was explicated. Oakley (1972) made the sex-gender distinction popular in sociology: sex was 'a word that refers to the biological differences between male and female: the visible differences in genitalia, the related difference in procreative function. 'Gender', however is a matter of culture, it refers to the social classification into 'masculine' and 'feminine'' (Oakley 1972:18). Questions about the role of nature versus nurture and the biological versus the social in gender were, of course, much older than their association with a terminological sex versus gender distinction. Nonetheless, at the centre of these debates was whether 'sex' (biological sex differentiation) causes 'gender' (culturally ascribed notions of masculinity or femininity). The polarised positions on this issue are referred to as 'biological essentialism' and 'social constructivism' (Stanley 2002:31).

2.2 Biological Essentialism

Much of the historical literature describing gender emphasised either a hierarchy and/or a dichotomy between men and women, which was understood to be caused and affected by biological and reproductive systems. There is a long tradition of European male theorists, from Aristotle and Aquinas to Freud, believing that women were 'deficient' or 'lesser humans' (Lips 2013:6). This is not so in all parts of the world. In Chinese Confucianism, for example, gender is often framed by *yin-nu* (woman) and *yang-nan* (man), complementary yet hierarchical opposites whereby *nu* are base and

nan are venerable. The concept of opposing but complementary spheres—*nei-wai*—permeated Chinese cultures (Rosenlee 2007:66-67). These philosophies draw a ritual and physical boundary between men and women, and, along with them, a division of labour, roles, rites and activities. Bourdieu (2001:7-8) argued that many of the basic categories through which humans acquire knowledge of the world are hierarchically structured and frequently gendered, with male associated with the superior (such as outside/inside, tall/short, light/dark etc.). The world understood through such categories, as embodied gendered dialectic, is framed around a hierarchy of differences which favour men, and, as such, male dominance is considered to be universal for it is entrenched in the natural world and human cognisance (Bourdieu 2001:8). The pervasive epistemology that emerges is one in which differences, inequalities and the division of labour between men and women are often simply treated as consequences of 'natural' differences between male and female humans, and, more significantly, that universal masculine or feminine traits stem from biological differences (see, for example, critiques by Lorber 1994 and Ortner 1974). These theories view not only the biological/ anatomical differences between men and women as determined by nature, but also the roles that are attached to these differences (Villerreal and du Guerny 2000).

Consequentially, if sex roles are fixed in biology, then they are not subject to change, and the hierarchy that societies have assigned to them is locked into the social structure, frequently with women perceived as inferior. It also follows that a belief in a natural distinction between males and females anchored in biology, and in particular reproductive systems, is also a belief that sex roles are ahistorical and unacculturated. Consequently, hegemonies that advocate sex construed as part of the natural order and as the factor that causes gender remove the possibility of conceptualising gender (and ascribed roles, behaviours and choices) as changeable. Critics (for example, de Beauvoir 1953) saw this approach as selecting fragments of biological and social research that fit into a pre-determined set of conclusions and belief systems.

The ‘biological essentialist’ view of gender is embedded in institutions, belief systems and cultural practices, and has a prestigious heritage, attributed to Plato and Aristotle and re-arising in France and Germany in the period after Darwin, contemporary with the rise of Neo-Scholasticism in the early twentieth century (Connell 2009:33). It was a suitable match with co-existing stereotypes of masculinity and femininity in European-derived popular culture, and existing structures of power and privilege. As a result, the character of women and their place in society was usually confined to the domestic sphere, or at best was seen in terms of pre-determined roles that often were inferior to those of men (Jackson and Scott 2002:1). The idea that natural differences between the sexes are the source that makes men and women distinct has also been deeply embedded in scientific discourses. In the twentieth century the behaviour of women and men was explained through the interpretations of survival mechanisms of early hominid evolution (Washburn and De Vore 1961; Washburn and Lancaster 1968). These influential models advocated that men did the hunting and fighting and had evolved to be aggressive, dominant, promiscuous, rational and responsible for all technological and social innovation, while women, who had the babies, were nurturing, domestic, passive, monogamous, and emotional (De Lamaler and Shibley Hyde 1998; Hager 1997). Studies show that such beliefs about gender persist into this century (Fiske et al. 2002; Lueptow, Garovich-Szabo, and Lueptow 2001; Spence and Buckner 2000). In addition, the hegemony of inherent difference between men and women inscribed in these simple, abstract, cultural categories is one that most closely describes (if anyone) white, middle-class, western heterosexual men and women.

The belief that a woman's 'nature' is biologically inevitable and so cannot be changed has been challenged by many authors for decades, notably MacCormack and Strathern (1980), Oakley (1972) and Rubin (1975). The separation of terms sex and gender was espoused by feminists such as Oakley (1972) as a way to distinguish between female and male biology and the social and cultural meanings that societies and individuals ascribe to being one or the other. In so doing the belief in gender arising from innate, biological factors that are impervious to temporal and socio-cultural input was able to

be contested. As the naturalisation of sex differences had been more detrimental for women than men, these constructions have been more often questioned by women. There was a slow but gradual increase in the use of the term gender through the 1960s and 1970s by academics in the social sciences who wished to emphasise the cultural, environmental, social or psychological determinants of masculinity and femininity (see Unger 1979). Some of these academics considered themselves feminists or at least sympathetic to the goals of the women's movement. Scott (1986) argued that 'gender' was offered as a term in an attempt to transform existing disciplinary paradigms, seen as exclusive and biased towards either male or female subjects. Used in this context, gender asserted a rejection of the use of the physiological 'sex', for a belief that the roles and relations between the two sexes are not necessarily 'natural', unchangeable or predetermined. The major increase in the use of the term 'gender' and the associated decline of 'sex' occurred in the 1980s after the adoption of gender as a technical term in feminist discourse (Fuchs Epstein 1988; Kessler and McKenna 1985; Lorber 1994; Scott 1986). Gender became the standard term for cultural distinctions between men and women, and sex the standard term for biological distinctions (World Health Organization 2001). Haig (2004) argues the expansion of the use of gender in the second half of the century appears to have derived from Money's (1955:254) concept of a gender:'[t]he term *gender role* is used to signify all those things that a person says or does to disclose himself or herself as having the status of boy or man, girl or woman, respectively. It includes, but is not restricted to, sexuality in the sense of eroticism.' Significantly, in Money's usage, an individual's gender role could differ from biological definitions of an individual's sex.

Theories of sexuality, as it refers to sexual choice and the structure and expression of sexual desire, has similarly been described in an essentialist terms (Cranny-Francis et al. 2003). The deterministic construction of sex/gender as rooted in biology, has thus also had widespread and enduring implications for how sexuality has been constructed across social science research. There is an enduring legacy of concepts of sexuality based in concepts of (Western) marriage, and reproductive (hetero)sexual intercourse, with

heterosexuality and homosexuality being regarded as the only valid categories for sexual identification (see Weeks 2018).

2.3 Social constructivism

The social constructivist interpretation of gender emerged as a paradigm in the 1970s. It advocated that gender roles and expectations are learned and are the result of a culture assigning behaviours and roles to the biological, and that these roles and expectations thus vary across cultures, time and space: 'That human males and females have fixed, significant and necessarily distinct behavioural propensities is far from clear. Just as foot binding in traditional China created women who were constitutionally incapable of certain kinds of physical exertion, so it seems likely that our culturally specified and different ways of acting themselves influence our physical lives' (Rosaldo and Lamphere 1974:6). The emergence of theories advocating the cultural constructions of gender led to a Second Wave of Western feminism, which (although radical feminists were often described as essentialist) largely embraced an androgynous view of gender equality. Gender was considered to be something that was the result of enculturation and there was nothing natural about it. It was argued that, throughout history and across cultures, definitions of masculinity and femininity have varied, and such variations contradict the essentialist view that masculinity, femininity and gender roles are biologically determined. However, the stereotypes surrounding masculinity and femininity have remained relatively static (Cheng 1999). Feminists such as Flax (1987) argued that gender is a concept continuously open to change and renegotiation. This view was exemplified in Liz Stanley's '*Should 'Sex' Really Be 'Gender' - or 'Gender' Really Be 'Sex'*"? (Stanley 1984). Stanley (1984) proposed three main bodies of evidence disproving biological essentialism.

1. Variations between cultures

Drawing on anthropological studies and considering a wide range of cultures, gender, maleness and femaleness are subject to almost endless variations; this means that gender may be seen and understood very differently in different cultures. Mead's (1935) *Sex and Temperament in Three Societies* is often cited as the watershed publication, as it

distinguished between sex and sex temperament and empirically grounded the distinction between the biological and social characteristics of men and women among the Arapesh, Mundugamor and Tchambuli. Mead demonstrated that the Western equations of masculinity with aggression and femininity with nurture were only one of several possible permutations, all of which have no intrinsic biological basis. Sugihara and Katsurada (1999:635) reiterate this perspective in their study of gender roles in Japanese society. Japanese hegemonic masculinity is characterised by a man with 'internal strength' as opposed to the physical strength that is typically emphasised by contemporary Western societies, such as post-contact Australia where male sporting achievement is revered. As John Howard, former Prime Minister of Australia, stated at an address in 1997 'All my life I really have regarded being Captain of the Australian Cricket team as the absolute pinnacle of sporting achievement and really, the pinnacle of human achievement in Australia. And that is the sentiment that millions of Australians throughout my life have had' (Howard 1997:1). North American notions of hegemonic masculinity predominantly included heterosexuality, power and dominance (Kiesling 2005), demonstrated in many American movies from *Rambo*, *Die Hard* and *Terminator* to *Magic Mike* and even *Indiana Jones*. This can be contrasted to the people of the Sambia region of Papua New Guinea, where masculinity 'is the outcome of a regime of ritualised homosexuality leading into manhood' (Herdt 1993; Macionis and Plummer 2005:307). Hence, engaging in homosexual acts, whilst considered an example of hegemonic masculinity in Sambia, can be considered a subordinated masculinity in North American and other cultures (Groes-Green 2009). Mieli (1980), for example, related the idea of a hierarchy of masculinities, which grew directly out of homosexual men's experience with violence and the prejudice of straight men. The sheer variability of the roles and relations of men and women across different societies and social groups presents itself as primary evidence against the biologically determinist view. If there is no constancy between how different societies expect men to be men and women to be women, then there must be something other than natural differences that underlie their behaviours.

2. Variations between one culture over time

Drawing on the historical specificity of the capitalist modes of production, work and class, were studies which followed Marxist tenets that saw gender as a hierarchy and a product of capitalism (MacKinnon 1982; Sanday 1981). These focused on the roles of power, difference and resistance in women's lives. In his work on family, private property and the state, Engels (1948) traced the changing trajectory of gender relations through history. He located the source of women's subordination, not in biological differences, but in the emergence of private property, and in women themselves being rendered as a form of property. In this view, then, gender inequality is not universal but arises under particular socio-historical situations. Further, subordination and domination arise contextually and women are not powerless under all conditions in a society. Thus, women may exercise considerable influence within the domestic domain while men wield power in the public domain. Key proponents of this approach included Haraway (1985), Rubin (1975) and Spender (1982), who argued that (Western) gender relations are located within systems of production and reproduction and have evolved to take the presently dominant form of capitalism, with materialism at their core.

An example of culture-historical change is that of colour preferences amongst Euro-American children. The current assignment of colour to gender whereby pink is associated with girls and blue with boys (LoBue and DeLoache 2011) may be stereotyped as a universal or even 'natural' preference, but in fact emerged as recently as the 1940s. The *Ladies Home Journal* (1918) described pink as ''a more decided and stronger colour,'' appropriate for boys, compared with blue, ''which is more delicate and dainty'', and an American newspaper *The Sunday Sentinel* on March 29th 1914 advised, ''If you like the colour note on the little one's garments, use pink for the boy and blue for the girl, if you are a follower of convention'' (cited in Frassanito and Pettorini 2008:881). In fact, the practice of colour coding gender was controversial, outraging early feminists, including Charlotte Perkins Gillman, who wrote in 1910 of the 'most conspicuous evil [in] the premature and unnatural differentiation in sex in the dress of little children' (Paoletti 1997:142). In traditional China, green was the colour

associated with female and red with male (Kommonen 2011:376). In the 1940s, when certain colour dyes were rare, pink dye was readily available and inexpensive. Since blues were rare and expensive and males were of higher status (Sommer 2000:6-8), it was thus considered more appropriate to dress sons in blue. Frassanito and Pettorini (2008:881) also suggest that Nazi Germany had something to do with the association of pink with femininity: Christian traditions in Germany and neighbouring countries reversed the traditional colour coding because of the strong association of blue with the Virgin Mary; the Nazis in their concentration camps used a pink triangle to identify homosexuals. The Nazis' choice of pink suggests that by the 1930s in Germany it was a colour that had become associated with girls.

3. Variations in one culture at one point in time

The notion of a stark demarcation between male and female has been questioned by several researchers, who argue that women and men are not always distinguished from each other physically or psychologically (Bjorkqvist 1994; Eagly and Karau 2002). Cheng (1999:296) stated that 'one should not assume that 'masculine' behaviour is performed only by men, and by all men, while 'feminine' behaviour is performed by women and by all women'. The most compelling evidence shows a disparity between biological sex and gender identity. One such example is the presence of transgendered persons (people who identify as a gender that does not correspond to their sex). For example, someone could be born with a penis and identify as a female (American Psychological Association 2013). In the case of intersex babies, culture is an important factor influencing decisions made about sex assignment. Two cases presented by Lee and Houk (2005) provide evidence of the powerful influence (both negative and positive) of postnatal social factors on the development of gender identity, and to a lesser extent on developing sexual orientation. Cultural differences in dealing with intersexuality and intersex individuals not only influence the patient's own psychosexual development, but also medical decisions and outcomes regarding sex assignment and consecutive management.

There are also a number of societies where 'supernumerary gender roles developed that apparently had nothing to do with morphological sex anomalies' (Lavenda and Schultz 2012:368). Not all cultures recognise the same anatomical markers for gender or not all markers as 'natural'. The Indigenous Bugis of Sulawesi Indonesia, recognise five gender categories rather than the two acknowledged in most societies (Graham Davis 2007). In Indigenous America, some nations have a third gender for 'Two-Spirit Peoples' (which the French denigrated as *berdache,* meaning a catamite or boy prostitute). These include the *nádleehé* of the Navajo, the *winkte* of the Lakota, the *warharmi* of the Kamia, the *ihamalea* of the Zuni and the *hwame* of the Mohave. The status of Two-Spirit people is filled by persons who remain members of their biological sex but assume the social roles assigned to both or the opposing gender. Lang (1997:100) notes, 'Ever since Europeans came into contact with North American Indian cultures, there have been reports on Native American males who partially or completely take up the culturally defined roles of women in their respective communities, doing women's work and feminine arts or crafts, such as beadwork, pottery, and basketry; sometimes wearing women's clothes; and often entering into sexual relationships or marriages with men'. Two-Spirit people were generally ascribed status on par with male and female genders and were not only males, but also women who lived, partially or entirely, with a male gender expression (Segal 2003:5). The title 'Two Spirit' is reflected in ethnographic instances cited by Williams (1992), when a young, usually preadolescent, boy would set out on a vision quest, seeking a relationship with a spirit being who would then help him determine and strive for his future life. For some, their vision was interpreted as indicating a Two-Spirit status.

Late 19th century Plains cultures also had unique Two-Spirit roles in instances of weddings, childbirth, child naming, and warfare (Segal 2003:5). However, as many male Two-Spirited individuals entered into sexual or marital relationships with men, contravening Western cultural norms, the persistent focus and interpretation since contact with Europeans has been directed towards male Two-Spirited people. Historical and cultural prejudice has resulted in interpretations reducing people's identity to a

categorical sex act, or pejorative accounts of homosexuality. An individual's identity as Two-Spirit had more to do with occupational preferences and personality traits than whom they desired sexually (Lang 1997:101). Moreover, the most reliable indicators of Two-Spirit status were economic and religious attributes, not sexual preference. In some nations, Two-Spirit people were attributed high status, respect and honour, as they surpassed norms of productivity. Examples of this include biologically male Two-Sprit people expert in crafts such as weaving, an occupation usually undertaken by women, and female Two-Spirit people revered in hunting, warfare or leadership, which were usually men's activities.

This is more than men and women taking on the opposing gender's roles. For instance, Hastíín Tł'a Awéé' ashkii (1867-1937), a Navajo *nádleehé*, combined skills of medicine man and a weaver to create a new genre of textiles with ceremonial designs from sand paintings (see Zorn 2008:99-102). Two-Spirit people fulfilled a number of important social roles, which included being an important aspect in ritual, and often were perceived as being imbued with spiritual power, or became shaman, 'the task of chopping down the first tree for the Sun Dance lodge specifically devolved on a *berdache*' (Lowrie 1956:50). Such examples of multiple gender paradigms demonstrate gender as fluid, non-dichotomous and an unstable social persona. This supports Stanley's (1984) view, in that the people falling into this category pose significant theoretical questions about the strength of cultural linkages between gender constructs and biological sex.

4. Socialisation/Sex role theory

The theory of the socialisation of gender integrates psychological and socio-structural determinants within a unified conceptual framework. Gender conceptions and roles are understood to be the product of a broad network of social influences operating interdependently in a variety of societal subsystems. From this viewpoint, human evolution provides bodily structures and biological potentialities that permit a range of possibilities rather than dictate a fixed type of gender differentiation. The first theorist

to write extensively and influentially on this topic was Freud (1931, 1933), now largely discounted by both feminists and contemporary psychologists (see, for example, Chodorow 1993; Horney 1973; Mitchell 2000). Gender roles have been described as social norms, or rules and standards that dictate different interests, responsibilities, opportunities, limitations, and behaviours for men and women (Johnson et al. 2007; Mahalik et al. 2003). Such roles structure individuals' lives, impacting aspects of daily life from choice of clothing to occupation, as well as group behaviour. Informally, by virtue of living in a social world, individuals inevitably internalise conventional and stereotypic gender roles, irrespective of their gender, and develop their sense of gender in the face of strong messaging about the correct gender role for their body. Gender roles shape and constrain individuals' experiences; men, women, and other genders are treated differently and have diverse life trajectories as a result of their ascribed roles and the degree to which they conform.

In essence, gender roles are reflected in a society's stereotypes. According to Kohlberg (1966), when a child acquires an understanding of gender constancy, he or she then tries to model his or her behaviour to the way society defines masculinity or femininity, as shown in the behaviour of others, on television, or in books. That is, the child is intrinsically motivated to become gender-competent, and becoming competent is equated with conforming to society's gender-role expectations. According to Bem (1983), gender-schematic processing is a direct result of society's emphasis on the importance of distinctions based on gender, distinctions consistently enforced but unrelated to the biological characteristics that define men and women. Thus, gender comes to be a primary way of reorganising input from the world. However, like Kohlberg's 1966 theory, it cannot explain differences in the behaviour of very young children, who are unlikely to have developed gender schemas.

In sum, the social construction framework argues that there are no essential, universally distinct characteristics of masculine or feminine—instead, behaviours are influenced by a range of factors, including class, culture, ability, religion, age, body shape and sexual

preference. The acceptance of gender as a social construct thus challenges many contemporary stereotypes of what men and women are and do. This might include specific skills or roles, such as that women weave baskets and men tend crops, or that women gather and men hunt, or that women are better carers and men are better drivers. The intersections of gender roles with other roles (such as ethnicity, age, and class) lend complexity to female and male behaviour.

While there is evidence that gender roles have varied historically and culturally, the Western stereotypes surrounding masculinity and femininity appear to have remained relatively static and entrenched (Cheng 1999). Hegemonic masculinity has been continually characterised as 'independence, confidence and assertiveness', with these traits relating directly to aspects of dominance, authority, power and success (Leaper 1995:1). Feminine traits are typically based on being 'understanding, compassion[ate] and affection[ate]' (Leaper 1995:1), perpetuating the role of the nurturing mother and domestic home-maker, defining success as a tidy house and well-fed children as opposed to the masculine success of wealth and status accumulation (Hoffman 2001). Such gender roles specify what men and women usually do and what they should do—that is, roles are descriptive, prescriptive or injunctive (Cialdini and Trost 1998; Prislin and Wood 2005). Cheng argues that women remain the subordinated sex in most cultures (Cheng 1999:298). Women's emancipation and the feminist movements gained significant improvements in women's rights, but historical notions of femininity – passivity, domesticity and beauty – continue to be perpetuated in Australian and wider society (Cheng 1999).

2.4 The sexual division of labour

The biological essentialist concept of gender has been extended to an acceptance of a universal division of labour, which is a basic structural element in human social organisation (Eagly, Wood and Diekman 2000). Evidence for the origins of the human division of labour comes from two main sources: primatology and palaeoanthropology (Fedigan 1997). Male specialisation in hunting is consistent with the tendency of male terrestrial primates to specialise in defence, a specialisation that gives a selective

advantage to larger males. Furthermore, while very broad generalisations have been espoused that men tend to hunt and women gather, early studies greatly underestimated the importance of female gathering and exaggerated the dependence of women on men (Zihlman 1997). The biosocial restraints of male size and strength and female reproductive activity increasingly gave men better access to new roles (e.g. farmer, hunter, warrior) that yielded wealth and prestige, thereby reducing women's share of economic contribution while retaining their domestic obligations. Such arguments based on tenuous evidence have also been framed in terms of transition and societal development, as an explanation for the progression from hunter-gatherer to agricultural and eventually industrial economies, whereby patriarchy became the dominant form of relations between men and women, which in itself is Eurocentric. Wood and Eagly (2002, 2005) proposed a biosocial origin model for the division of labour along sex lines. Such arguments can be summarised as accepting that differences in behaviour within a given society arise from the dynamic interaction between (a) biologically-based sex differences, especially that women bear and nurse children and that men have greater size, strength, and speed; (b) developmental processes; and (c) local culture, technology, and ecology.

The social roles that emerge from this interaction are characterised by a division of labour because the physical endowment of each sex allows its members to perform certain tasks efficiently, depending on a society's circumstances and culture. Specifically, childbearing and the nursing of infants enable women to care efficiently for very young children and cause conflict with roles requiring extended absences from home and uninterrupted activity. Men's greater speed and upper-body strength facilitate their efficient performance of tasks that require intensive bursts of energy and strength. Most social behaviour is embedded in the performance of specific roles, and gender roles serve as a backdrop that pervades the performance of such roles. Androcentrically biased interpretations were dominant in archaeology (see Lee and De Vore 1968), and are often unconsciously extrapolated to the past, giving such theories a greater sense of legitimacy (Hurcombe 1995). Gender and sexual differences would have existed in some

form in the past, since gender operates in society by structuring social relations, the division of labour, social stratification and power. Models for understanding these relationships, however, had been androcentric (Gibbs 1987:80; Dobres 1988).

An ongoing debate on the universality of male domination by writers such as Ortner (1974) argued that males have dominated in every society. Ortner's argument begins with the premise that nature is universally devalued by culture; because of women's role in reproduction, they are closely identified with nature, and therefore, share in the universal devaluation of nature by culture. Though enormously influential in anthropological discourse, it is arguable that Ortner's idea hardly withstands the test of universality and is, in the least, a Eurocentric position. This is because the argument was based in the concept of a nuclear family, that women's social place in the domestic domain brought her close to the role of nurturer (Ortner 1974:72). This analysis is based on white middle class society and Ortner devoted only superficial discussion to any other cultures, while simultaneously overlooking differences amongst women. Her work was clearly influenced by Enlightenment thought and notions of Western technological advance, as well as the works of de Beauvoir (1953), Durkheim (1893) and Lévi-Strauss (1962). Since modes of production were/are not universal, the argument does not hold in cultures where production is based on kinship systems. Rosaldo's argument that female subordination is rooted in the division between domestic and public spheres, along with a consistent devaluation of the former, is open to criticism on similar grounds (see Rosaldo 1974).

Others such as Sanday (1981) highlight nuances in this proposition by showing that women's power in many societies outweighs male dominance. Using data from 150 societies, Sanday (1981) argues that, even in the communities in which males dominate, women hold varying degrees of power, albeit informal. What is interesting about the traditional gender system in Western society is not that it never changes, but that it sustains itself by continually redefining who men and women are and what they do, while preserving the fundamental assumption that whatever the differences are, on

balance, they imply that men are more powerful. In other words, changes to the interpretation of gender, rather than evolving through and with social discourse over time in line with other social phenomena, have been trapped in unchanging stereotypes based in biological essentialism. The essential form of gender hierarchy—that is, the cultural assumption that men have higher status and authority than women—has persisted throughout major socio-economic transformations in Western societies, such as industrialisation, the movement of women into the paid labour force and, more recently, the movement of women into male-dominated occupations (Ridgeway and Correll 2004).

2.5 Gender and religion

The manner in which gender is socially constructed can also be related to the religious and kinship organisation of a society (Agrawal 2012). Neither kinship nor religion are a privileged site of gendered relations, but both tend to bear strongly upon the particular characteristics of gender differences and inequalities which prevail in a society at any given time. Many religions have naturalised gender differences, in which invariably women are seen as inferior to men in their mind and bodily attributes, and men are treated as the normative human beings from whom women represent a deviation.

Most religious worldviews also embody an ambiguity towards women. On the one hand women are treated as inferior and dangerous; on the other, they are revered. For example, in the Roman Catholic Church, a special role and devotion is accorded to Jesus' mother, Mary. Conversely, the role of Eve in the Judeo-Christian Biblical story of the Garden of Eden affected the development of a Western notion of woman as 'temptress'. Mary Magdalene is, in this manner, a powerful symbol of the attitude towards women in the Catholic Church. Early in the Church's history she was one of the most revered saints and the embodiment of Christian devotion and repentance. In all four gospels of the Bible, Mary Magdalene was a prominent woman and present at the crucifixion of Jesus, with the status of an apostle (Marjanen 1996:217). Beginning with a few statements in Christian records dating to the first through third centuries (BCE), a recasting of Magdalene occurred in the sixth century under Pope Gregory I. Of most

impact was the claim that she was a repentant prostitute—this was almost certainly untrue (see Haskins 1994; Jansen 2000; Schaberg 2004). Later, Magdalene, as an object of Renaissance and Baroque art, became a figure of nothing less than holy pornography in the Catholic imagination. Thus Magdalene 'became the redeemed whore and Christianity's model of repentance, a manageable, controllable figure, and effective weapon and instrument of propaganda against her own sex' (Haskins 1994:95). The linking of sexuality to Magdalene gave rise to a story that emphasised the possibility of forgiveness and redemption, but what most drove her sexualisation was the male need to dominate women in the Catholic Church. The interpretation of the '*noli me tangere'* (Latin for '*do not touch me'*, Jesus' words to Mary Magdalene in *John 20:17*) was construed to mean a warning or prohibition to women against meddling, touching, or interfering, but principally as a prohibition for women to speak in church or serve the sacraments. The identification of Mary Magdalene as sinner and prostitute has endured ever since, discrediting sexuality in general and disempowering women in particular.

2.6 Gender and kinship

The kinship organisation of a society also plays a significant role in shaping gender relations and roles. The system of descent followed in a social group has direct consequences for the construction of gender relations. Kinship, defined by Lavenda and Schultz (2015:374) as 'systems of relatedness based on ideas of shared substance', have been based on a Western model of human reproduction. Both kinship and gender are about relational practices, articulating different forms of relatedness. Moreover, there is a general recognition that not only are there cross-cultural variations in the way kinship and gender are perceived and practiced but that also within any one society there may be different elaborations of kinship and gender (Stone 2010; Souvatzi 2017).

Anthropologists (such as Schneider and Gough 1961, Nielsen 1990 and Whyte 1978) have shown that whether the descent system of a society is predominantly patrilineal, matrilineal or bilateral has major implications for the construction of gender identities and relations. This is because the descent system is very often the basis of group

membership, entitlement to valued resources, ownership of property and patterns of residence.

Societies that are strongly patrilineal are widespread. Such societies are usually among those that are most unfavourable to women, as they tend to markedly differentiate between the sexes. In a patrilineal system descent is reckoned in the male line and usually women move to their husband's home after marriage, a practice referred to as patrivirilocality. In such a system, there is a high value placed on the male offspring and men largely inherit property. Patrilineal societies are also the most likely to place a high premium on female chastity, which leads to strict vigilance of female sexuality and women becoming property (Gough 1994; Nongbri 1994).

2.7 Feminism

Theories of gender as a social construct are entangled with the growth and evolution of feminism. Unfortunately there is a tendency to view studies of gender as automatically having radical feminist or overtly political motives attached. Such a two-dimensional view is problematic in that it simplifies all debate on gender to an anti-man stance, or a women's-issues-only approach. There is, however, no one definition for feminism; it is a diverse school of thought and one continuously redefining itself, resisting categorisation. As Tong (1998:1) explained, the movement is old enough to have labels such as 'liberal', 'radical', 'Marxist-socialist', 'psychoanalytic', 'existentialist', 'post-modern', and, more recently, 'post-colonial' and 'ecological' attached.

With the advent of the women's movement in the 1960s, feminists began to question various ideas, presumptions, images and representations, as well as traditional theories about women and the feminine. Feminists used gender as a term to refer to issues primarily relating to women, as it clearly signalled a differentiation between the socio-cultural roles of women and their biology. Feminists were preoccupied with the inclusion of women into those spheres from which they had largely been excluded, and representations which would enable women to be regarded as men's equals and relevant objects of intellectual concern. In many countries 'gender' has been perceived

as an imported concept of western/Anglo-Saxon/Feminist origin (see Villareal and du Guernay 2000). As it stems from a Western feminism, however, many cultures consider its status *a priori* unacceptable. The set of gender relations that are frequently thought to be associated with it are perceived as threatening to the existing social order (ultimately leading to the empowerment of women at the expense of men). An acceptance of the concept of gender would thus mean the acceptance of a challenge to the existing set of relations and power structures at both the macro and micro level.

Generally, early feminists continued to rely on the methods, techniques, concepts and frameworks of traditional patriarchal theories, especially in leftist or radical form, using them to develop accounts of women's oppression (for example, many feminists espoused the work of Marx, Reich, Marcuse, Laing, Sartre, and so forth). Women used these texts to develop various theories of oppression by modifying and adjusting their details in order to account for women's specific oppression. While remaining critical of the impact of patriarchal discourses on the positions of women, feminist theory *is* largely concerned with 'women's issues': those issues that directly affect women's lives. In the 1960s, feminists directed their theoretical attention to patriarchal discourses, those which were either openly hostile to, or aggressive about, women and the feminine, or those which had nothing at all to say about women. Instead of being ignored by, and excluded by, theory, women were to be included as possible objects of investigation. Issues of direct relevance to women's lives–the family, sexuality, the domestic sphere, interpersonal relations—were included in academic research questions, in some instances for the first time as worthy and relevant objects of intellectual concern.

General characteristics of feminist theory can be surmised to include the following:

1. Women and the feminine become worthwhile objects of theory and research. Having been neglected or denied value in patriarchal terms, women become focal points of empirical and theoretical investigation.

2. Women are now conceptualised as men's equals —as the same as men in relevant socio-economic and intellectual terms.
3. While remaining critical towards the attitude of patriarchal discourses to the positions of women, feminist theory is largely concerned with 'women's issues', those which directly affect women's lives.

The aim of including women as men's equals within patriarchal theory is, however, problematic. It is not possible simply to include women in theories where they have previously been excluded, for this exclusion forms a fundamental structuring principle and key presumption of patriarchal discourse. Many patriarchal discourses are incapable of being broadened or extended to include women without major upheaval or transformation. Moreover, even when women were so incorporated, at best they could only be regarded as variations of a basic humanity. Further, while it was now possible for women to be included as the objects of theoretical speculation, their positions as the subjects or producers of knowledge were not raised (see Gross 1986:191-192). Although problematic, this aspiration towards equality by 'adding' women was nevertheless necessary. Without such attempts, women could not question the naturalness or seemingly inevitability of their second-class status. This aim of equity served as a political impetus for future change.

With Feminist Standpoint theory (Harding 1993; Hartsock 2004, Narayan 2004), women asserted themselves as not only objects but also as subjects of knowledge, with particular perspectives and points of view that were different from men's. The study of gender has thus moved in tandem with feminism, but has also been enhanced by several contemporaneous trends in historical scholarship. Many parallels can be found between the historiography of Indigenous, Black and post-colonial cultures, since all fields sought visibility for groups that were mis- and under-represented. Historians established analytical prominence for concepts such as 'gender', 'class' and 'ethnicity' and shared the premise of their social construction.

Gender, like power and other complex social concepts, has also been theorised as a performance, constructed through the everyday practices of individuals (Butler 1988; Lyons, 2009). Butler (1988, 2004) argued that gender is manifested in the ways that individuals style their bodies and carry themselves, and also in how they speak and move. In this way, gender is not only produced by and on particular bodies but is also located within particular activities, behaviors and practices. It is through the 'stylised repetition' of these gendered practices (e.g. body gestures, mannerisms) that gender is performed and embodied (Butler 1988, 2004). Furthermore, as Lyons (2009) explains, 'Through engagement in these behaviors or practices, gender becomes accountable and assessed by others, and aspects of gendered identity become legitimated' (Lyons 2009:395). Further, West and Zimmerman (1987) challenged the sex-gender distinction by arguing that sex, and not just gender, is a social achievement and performance:'[they are] socially agreed upon biological criteria for classifying persons as females or males' (West and Zimmerman 1987:127).

Butler's *Gender Trouble* (1990) has also used instances from queer contexts to question the binary nature of sex and gender categories, arguing that both are socially constructed. Foucault's critique of the assumption that sex is a biological fact (Foucault: 1976) has underpinned such theories. Foucault's approach can be surmised as being that sex owes its existence to particular scientific and non-scientific discourses. Sex and gender are nevertheless both important and mutually reinforcing concepts. In the last two decades, conceptually stagnant notions of gender and sex that contrast masculine males with feminine females have also been rejected by many researchers (for example, Lorber 1996, 2005; Johnson et al. 2007). Sex polarised as females and males, sexuality polarised as homosexuals and heterosexuals, and gender polarised as women and men, reflect un-nuanced and putative 'normals' (Lorber 1996).

Wood and Eagly (2010:629) questioned whether, if it is generally accepted that most differences between males and females are the joint products of biology and society, the modifier of differences and similarities between women and men should then be

'gender' or 'sex'? What about the modifiers for roles, stereotypes, and identities—'sex' or 'gender'? Wood and Eagly (2010) proposed that this issue can be resolved by abandoning the biology versus culture meaning of sex versus gender in favour of definitions that recognise the intertwining of both. As argued by Addis and Cohane (2005:635):

> Understanding the social context of masculinity (and gender more broadly) is similar to understanding the social context of race and ethnicity. Approaching important questions from only one perspective of difference is a bit like assuming we can only understand one racial, cultural, or ethnic group by comparing it with another.

2.8 Terminology

Sex is used and defined in this dissertation according to its common-language meaning of male and female as categories (e.g. ' into which humans and most other living things are divided on the basis of their reproductive functions ' [Oxford English Dictionary 2009:138]). These two groups are based on a biological reality of differing chromosomes and associated hormonal and reproductive differences. The term gender refers to the meanings that individuals and societies ascribe to males and females and the meanings that individuals impute to themselves. It is accepted here that gender is a product of human culture, and that notions of gender are not constant but specific to time and place and are therefore historical. Terms such as gender role and gender identity refer to cultural meanings in this sense. Sex and gender thus are separated into convenient categories that reflect the natural language definition of these words. The use of gender also denotes that Western sex roles are not universal. Systems of social differentiation, such as political status, class, ethnicity, physical and mental disability or age, modify gender roles. In sum, gender is 'the cultural interpretation of sexual differences that result in the categorization of individuals, artefacts, spaces and bodies' (Gilchrist 1999:xv). It is not stable, but contradictory, accumulative and changeable across time and place, an inconsistent yet permanent part of history and life.

2.9 Why is Gender important?

> To date, most of our attention has focused on defining what gender is, and the corollary, where or how gender can be linked to the material world. I find it useful in this context to raise the question of what gender does (Wurst 2003:231).

Understanding the importance of an epistemological gender lies at the crux of this dissertation. This is because gender is a fundamental organising principle in virtually all spheres of social life, material culture and personal identity. Gender is deeply contextual, and roles and relationships intersect with those of identity, race, class and hierarchy.

Gender systems, like those of race and class, are cross-cutting variables that influence and shape what is expected, allowed and valued in a woman/man and girl/boy in specific contexts. In utilising a gender approach, the focus is not just upon individual women and men, but crucially on the systems which determine gender roles and/or responsibilities and power dynamics: 'many feminists argue that sex/gender categories and dynamics are fundamental, system wide structuring principles in all societies (despite wide diversity in the form they take) and conclude on this basis that any adequate model of system-level processes must take gender structures into account' (Wylie 1991:35). In addition, gender, like other social structures, is multi-dimensional; it is not just about identity, or work, or power, or sexuality but all these things at once. Understood analytically, gender is thus a governing code that pervades, and hence systemically shapes, how we think, what we make and do, what we presume to 'know', and how such knowledge claims are legitimated.

Ideologies premised upon biological essentialism underpin unjust gender systems. Hence, a necessary first step is the interrogation and articulation of these premises and their hidden meanings. Contemporary cultures have inherited a complexity of assumptions, largely implicit, concerning the social order and the relationship of women to men, and individuals to society. In the modern era, this is a product of the expansion

of Europe and the establishment of Euro/American cultural hegemony throughout the world (Oyěwùmí 2002). One impact of Eurocentrism is that male gender privileges and patriarchy—essential parts of the European ethos—are enshrined in academic research and in the production of knowledge about human behaviour, history, societies, and cultures (see Hill Collins 1990).

Gender-based inequality is pervasive and systematic in patriarchal societies, although both men and women are sometimes oblivious to it in their day to day lives:'[m]any researchers in sexual behaviour theoretically acknowledge cross-cultural variation, the flexibility of human behaviour, and the power of enculturation; however, they rarely analyse the powerful ways in which the gender system and gender ideologies of their own society inform their work' (Vance 1980:130). Furthermore, is it perhaps that male researchers rarely see themselves or their work as being 'gendered'? As Flax (1987:629) has argued, '[i]n a wide variety of cultures and discourses, men tend to be seen as free from or as not determined by gender relations. Thus, for example, academics do not study the psychology of men or men's history. Male academics do not worry about how being men may distort their intellectual work'.

The patriarchal nature of most societies has shaped and perpetuated gender inequality to the extent of legitimising and/or naturalising male domination and female subordination (Enloe 2017; Spencer-Wood 2016). The arguments in favour of the universal subordination of women have gained indomitable support because explanations of gender inequality rest on the causal relationship to biology. The recognition of a causal relationship does not mean, however, that the causal links are simple. It does not mean that the causality occurs without mediating social causes and it does not mean that the links to biological processes are equally influential under all social conditions. There is a role for biology, but it is subtle. Women's responsibility for childbearing appears to have created a differentiation between the sexes that invariably resulted in a gender division of labour in many societies (see Balme and Beck 1993).

However, it is problematic to confuse the heritage of the phenomenon with its continued existence.

It is simply that researchers must move beyond the hegemony that humans are ruled or determined by biology or genes, and in particular that women's biology somehow makes them inferior, which is surely one of the most atypical but also one of the most far-reaching and pernicious epistemologies. Put another way, biological sex differences, like physical racial differences, are real, but it is the socially created ethnic and gender differences that matter. It is known that gender discrimination exists, as does racial discrimination, but the pervasiveness of biological essentialism has been used to promulgate female inferiority through the production of knowledge to sustain and bolster social power structures. As Wylie (2006:172) argued, false universalising has long been subject to acerbic critique, but will continue to be impervious to counter evidence and critical analysis unless direct engagement is made with the assumptions that stabilise it.

The stereotypes arising from universalised gender roles are a basis for prejudice and discrimination, and both men and women are subject to these negative processes (Brannon 2004). Sexism and discrimination result when the status and role of male and female become stereotyped. Sexism, a form of prejudice, involves reactions to individuals based on the stereotypes one holds of their gender. The gender systems in place in many contexts are negative for men as well as for women by creating unrealistic demands and requiring men to behave in narrowly defined ways. As such, understanding theories of gender must concern and engage both men and women. It is also necessary to move beyond the notion that things that are socially constructed are somehow not as real, or not based in fact. Social constructs are real—that is what makes them powerful.

Race, class, gender—these are all social constructs, but it is because they are socially constructed that they have tremendous effects on the lives of people. For example, in

South Africa, a distinct mixed category of 'coloureds' existed under apartheid, and the Yugoslav war of the 1990s was fought on ethnic grounds. In both cases it is possible to explain the particular divisions and discrimination between people. There is no need to be convinced that race or ethnicity exists, or that it has a profound impact. Gender, on the other hand, loses salience and is dismissed as superfluous. Because it is easy to slide and jump from one set of parallel categories to another, a bias in favour of men may also favour whiteness, adulthood, heterosexuality, the able bodied, as well as an upper class, western imperial identity. So when gender is heavily marked to signify deep naturalised inequality between women and men, it can automatically serve to naturalise great inequality elsewhere. Furthermore, avoiding gender polarisation through false dichotomies prescribed by essentialism can provide more nuanced understandings of societies, as well as insights into the lives and experiences of women and men. Nelson (2000:2) argues that this does not negate the prior androcentric interests, but does add to them and change them.

The research conducted on gender to date is both a considerable achievement and an indispensable starting point. Limited engagement with, resistance to, or inadequate comprehensions of, gender not only distort but also undermine otherwise sound social research. By refusing to engage with scholarship that challenges basic presuppositions of gender, academic disciplines such as archaeology fail to meet their own criteria of scientific enquiry, neutral observation and objective analysis. There is still a lack of wide-ranging, comparative and longitudinal studies about women's behaviour, experiences, means of organising, response to power inequalities and materiality—among other concerns. Following Beckwith (2005), this may be redressed by the acceptance and inclusion of two basic meanings of gender: gender as a category and gender as a process. Gender as a category requires the multidimensional mapping of socially constructed, fluid identities and manifestations of masculine or feminine. Using gender as a category permits delineation of specific contexts in which masculine or feminine behaviours and/or actions result in particular outcomes, such as occupation and access to resources, amongst others. In addition, gender as analytical category permits

meaningful single-sex research. Gender as a process means investigating the behaviours, ideologies, practices, dynamics and conventions engaged in by individuals, institutions and social groups, as well as by cultures. These two meanings should shape social research questions and strategies of analysis, and highlight the ways in which gender works homogeneously and heterogeneously, to pinpoint gender in a pattern of co-efficients that represent paths, experiences and mechanisms.

CHAPTER THREE

LINKING GENDER AND ARCHAEOLOGY

This chapter reviews the key theoretical concepts that intersect and inform the location of gender within archaeology. Emphasis is placed on the dynamic and reciprocal relationship between symbolism and material culture through the theories of materiality and semiotics. The negotiation of gender through social interaction and enculturation is also examined, employing the concepts of agency, practice, performance and heterarchy.

Explicitly, gender is a deeply ingrained factor affecting individuals, as well as the materiality, form, and operation of any given society, traversing issues of race, class, status and power, as discussed in Chapter Two. Archaeology as a discipline is predicated on the analysis of material culture and time, and the methods and techniques that are applied to such studies (see Gardin and Peebles 1992; Leone and Potter 1988; Malina and Vasicek 1990; Renfrew and Zubrow 1994; Tilley 1990). As archaeology encompasses the study of past cultural systems and material culture, *ipso facto* gender is a necessary part of any theory on social relations. The implicit argument, then, as proposed by Sørensen (2000), is that, to understand and interpret a past society, it is necessary to consider its gender structures. Further, to understand the way in which people in the past behaved, acted and worked (amongst other things), it is essential to consider that gender played a role in those identities and actions.

Despite the apparent cogency of such an argument, the hypothesis of gender in archaeology may be perceived as a paradoxically opposing, or contradictory, concept: how can you find gender archaeologically? Gender is a process and an act (Lorber 1994:101), so it might be intangible, ephemeral or ethereal. In contrast, traditions of study in archaeology are reliant on epistemologies of evidence—the materialities of places, spaces and artefacts, such as lithics, ceramic, glass, metal, and bone, the 'material presence and the concrete and specific and formal qualities of beings and

things' (Hamilakis 2013:4). Hence, there is no obvious reconciliation between the two—how can gender be pinpointed to physical, perceptible, material evidence? Unpacking this question is, in essence, a political process, as the answer may require the uncomfortable analysis of established disciplinary arrangements and research conventions, for example, the privileging of universals over particulars (Ortner 1974:68), and the debate between processual and post-processual archaeologies that typically revolved around the issue of what can be 'seen' in the archaeological record (Brumfiel 1992; Shanks and Tilley 1987;Wylie 1992). Thus emerges the broad issue of the legitimacy of the 'invisible' in archaeological research. This theoretical point goes further than the analysis of gender, to the basic 'problem' that underwrites all processes of designation, that is, the reticence of archaeology to engage with that outside the physical and traditional methods and categories, to grapple with the things that remain 'unsaid' or 'invisible' (Lazzari 2011:195). This is predominantly because the field of archaeology, linked to notions of modernity and originating from a western academic tradition, has historically conferred greater value on the interpretation of objects that conform to largely functional meanings.

As gender is both a process and a category of analysis it cannot always be simply observed; it is not a particular object, nor is there a simple formula to find 'it', just as it is impossible to 'see' social relations of any kind (Conkey and Gero 1997). However, as Lesick (1997:39) pointed out, gender archaeology is not simply a problem of method or functional identification, but an issue of conceptualisation. What is required is an understanding of gender as a structuring principle that is communicated and reproduced through a process of socialisation or enculturation in which material culture plays an active role. Thus, in order to understand the relationship between gender and material culture, as well as the archaeological expressions of gender, the ways in which 'objects and humans are co-dependent' (Knappett 2002:98) must be considered.

3.1 Gender and material culture

Material culture is defined as the manifestation of culture through material fabrication (Preucel 2010:4). Adapting Appadurai's (1986) and Preucel's (2010) views on material

culture, both gender and objects are not passive reflections of societies, they are both active participants in social practices that constitute selves and others. Further, there is an inherent semiotic dimension to the study of all material culture as a product of human activity; it always signifies something other than itself (Preucel 2010:4). 'Materiality' is conceived here in terms of the production and allocation of socially valued resources of different types within a range of social practices. The notion of materiality is therefore not only restricted to the economic (Anthias 2001:378). Once 'the material' is formulated around the idea of resource allocation and hierarchical placement with regard to different types of socially valued resources (which can be cultural as well as strictly economic, although economic resources may possess cultural value and cultural resources may possess economic value), this allows ethnicity and gender a definitive role in a theory of social stratification (Anthias 2001:379).

Material 'things' exist within networks of relations that serve to define, mediate and order them, and which in turn are acted upon, affording them meaning and purpose within a system of social relations (Law 2002:91-92). Objects may also signify or establish social, cultural or personal meanings or information; in other words, have a cultural-communicative capacity. Some 'things' or places were crafted with women in mind and some with men, some by women or by men, and sometimes gender shaped the internal spaces and furnishings of houses, or limited access to places or objects. Sometimes more than purely functional, these things contain complex meanings, enabling acts of display at every level of society in production, consumption and demonstration, or have meanings that changed over time.

By interacting with 'things', people perform(ed) and learn(t) public, private, and personal experience(s) of gender. This is loosely what was termed 'social interactionism' by Blumer (1969). This approach suggests that people relate to their environments via meaning-laden symbols and interpretive interactional processes that help them learn norms and ideals (Janning et al. 2011). In other words, objects and spaces themselves can serve as symbols of socially constructed roles used to consolidate social norms. The

private/personal experience of gender achieves signification and reinforcement through material culture. Deegan and Hill (1987:4) argued that symbolic gestures are made through reference to the material world and provide common sense knowledge of how to proceed as a man or woman. Importantly, material objects can provide social actors with identity continuity and role clarity, particularly during life transitions. Cherished items can assist social actors as they maintain and revise roles (Kroger and Adair 2008); further, these items can signify to others what parts of their roles are worthy of display (Traver 2007). So, in any gendered society, material things can be read as having nuanced gender codes. So, too, contextually determined gender expectations inform the use of such objects.

An obvious example is mass production of dolls in the United States from the nineteenth to the twentieth centuries. Formanek-Brunell (1994) states that between 1830 and 1930 dolls were designed and produced by women who believed that boys as well as girls should play with them and, as such, produced dolls of both genders (Formanek-Brunell 1994:4). However, 'after World War I, professional businesswomen in the field were progressively marginalised or disillusioned, while their male counterparts engaged in the mass production and marketing of dolls as symbols of a resurgent idealised domesticity' (Rosenzweig 1994:450). The *Kewpie* doll, for example, was originally an androgynous boy designed by Rose O'Neill, but was feminised when it became produced by men (Formanek-Brunell 1994:4). Overall, the trend was towards the idea that dolls be marketed to young girls for the purpose of learning domestic roles and mothering (Lind and Brzuzy 2008). From the early 20th century, the trend has also been towards dolls which look and feel more realistic, as such the settings of these dolls included tea sets, dolls houses, prams, and homemaking equipment, as well as replica babies in need of potty training (see Chudacoff 2007).

3.2 Agency, practice, and performance theories

Agency

Theories regarding agency must also be noted here, as they are somewhat congruent with examinations of gender and material culture (see, for example, Dornan 2002, Hegmon 1995 and Tringham 1991). This is because agency theories recognise the importance of individual action within given structures. Materials affect how people act their gender, but agency also influences it. It was noted by Gero (1985, 2000) that women were particularly absent from agency-focused analyses in archaeology. Brück (2001:653) also argued that many accounts focussing on practice and action implicitly assume those in power to be male. These were important arguments, as they suggested some of the more insidious political effects of contemporary practice. As a general way of understanding how people act in society, the application of agency theory derives, in part, from personal views on how an individual thinks people in other societies should or did act. Agency theories can thus be tools for populating the past with actors whose situated experiences and activities do little more than recreate those of the theorist (see Brumfiel 2000). Thus, an unconsidered version of agency can be used to reproduce or naturalise the political forms of relations and dominations within which we now live, and can be problematically androcentric and essentialist (Bender 1991; Gero 2000). Most archaeological reconstructions of agency in the past have dealt exclusively with adult males, leaving the majority of society relegated to invisible (Dobres and Robb 2000:13). Other critical works on gender and agency included studies by Watson and Kennedy (1991) on prehistoric women who planted the first domestic crops and by Spector (1991, 1993), who highlighted women using awls to work hides.

People exercise agency, but objects may also be considered to exercise it (see De Marrais et al. 2004; Dobres and Robb 2000; Marshall and Gosden 1999). This is because objects can be engaged as extensions of people's bodies, their social intentions and their social relations. In this sense, objects 'exercise' an agency which is like that of humans in that it refers to, and act through people, but it is not the same as human

agency because objects do not of themselves exercise volition or intention (Robb 2004, cited in Marshall 2008).

Practice

An individual's place in a structure affects the way they see and respond to the perceived 'rules of daily life'. Bourdieu (1977), Giddens (1979, 1984) and Ortner (1984) are recognised as pioneers of theories of social action who focused on the dialectic between agent and structure through practice (Hodder and Hutson 2003).

Bourdieu's *Outline of a Theory of Practice* (1977) may inform the understanding of gendered 'rules of daily life', through the key concepts of habitus and doxa, and his related views on field. Habitus is a unique system of deeply ingrained habits, skills, and dispositions, and the unconscious views that an individual has, based on past experiences and dominant social structures (Dornan 2002:305). Habitus is created through a social, rather than individual, processes, leading to patterns that are enduring and transferrable from one context to another, but that also shift in relation to specific contexts and over time (Navarro 2006:16). Habitus is neither a result of free will, nor determined by structures, but created by a kind of interplay between the two over time: dispositions that are both shaped by past events and structures, and that shape current practices and structures and also, importantly, that condition our very perceptions of these (Bourdieu 1985:11). These all lead to an unconscious acceptance of social differences and hierarchies, to 'a sense of one's place' and to behaviours of self-exclusion (Bourdieu 1985:24). Habitus includes the knowledge an agent has of an object, and the contribution this knowledge makes to reality of the object. Habitus creates taste and disposition for 'things', and heavily influenced by an individual's social, cultural and economic capital.

A linked concept important in Bourdieu's theory is the idea of *fields*, which are the various social and institutional arenas in which people express and reproduce their dispositions, and where they compete for the distribution of different kinds of capital

(Gaventa 2003:6). A field is a network, structure or set of relationships which may be intellectual, religious, educational, or cultural (Navarro 2006:18). People often experience power differently depending which field they are in at a given moment (Gaventa 2003:6), so context and environment are key influences on habitus. Fields help explain the differential power, for example, that women experience in public or private spheres.

Doxa emerges from the socialisation of habitus (Bourdieu and Eagleton 1992). Bourdieu (1977), explained doxa as behaviour adopted through repetition and conserved through its material expression: behaviour that has become so thoroughly routinised that it cannot be considered agency. Agency lies within the ability of the individual to comprehend the limits of doxa and their will to break out of it. In Bourdieu's approach, agency is a meaningless concept without the background of doxa. Individuals are aware of the rules by which they should conduct their day-to-day lives and use that knowledge to inform their everyday interactions. They sometimes do things without intending to, and things they do intend have unintended consequences. Bourdieu's concept of doxa has been applied in archaeology (see, for example, Barrett 2000, 2001) both because of its intrinsic materiality, and its high visibility due to the nature of its repetition, which compounds patterns. If doxa can be identified in the archaeological record, then this becomes the social and material backdrop against which agents moved and interacted. Bourdieu's concept of doxa may be suitable in considering in gender both because of its intrinsic materiality, and its high visibility due to the nature of its repetition, which compounds patterns. If we can identify doxa in the archaeological record, we then have the social and material backdrop through which agents moved and interacted. If doxa is examined diachronically, then it may be possible to make inferences about agency.

The concept of habitus has been applied to describe conscious/unconscious behaviours constrained by social norms. Shackel (2000), for example, asked how gender specific consumer choices helped to create a working class consciousness in 19th century America at Harpers Ferry Brewery. He described workers as active agents as they

reacted to new industrial systems; for example, some factory workers also resisted change by consuming the company's product 'on the job' (resistance to imposed time management), concealing discarded bottles and hence their subversive behavior. This loss of product took away from the owner's earnings (Shackel 2000:236). Women of Harpers Ferry responded to the emergence of new industrial technologies and associated ideologies of consumption through the choices made when purchasing the latest ceramics. Armoury households increased purchases of new and fashionable tableware, while factory worker, on the other hand, resisted the change by preferring unfashionable, outdated goods and designs, actively making choices about mass-produced goods, despite economic incentives to change. Both agency and practice theories thus allow 'us to explain material culture differences in terms of tensions and social conflict within a society' (Shackel 2000:243). In this example, Shackel asserts human actors constantly negotiate cultural systems and agency theory exposes the role of agents as they express conflict with the dominant social system through the creation of their material world in more or less conscious ways.

Performance

A related perspective that focuses on material traces produced through repetitive action and agency is gender performativity (Perry and Joyce 2001; Voss 2005). Butler's (1990) concept of gender emphasises corporeal practice, connecting the notion of doxa, embodiment and material culture. 'Doing' gender describes an ongoing, dynamic process that involves 'the stylised repetition of acts through time' (Butler 1990). The act, or activity, of gender is 'both intentional and performative, where performative suggests a dramatic and contingent construction of meaning' (Butler 1990:190). A critical question in the archaeological examination of gender performance is 'how and why certain kinds of action came to be representative of certain kinds of gender' (Perry and Joyce 2005:115).

Butler's theories on gender, though complex, described it as a material, visible process, produced by processes that occur on the surface of the body. The public, repetitive

actions of movement, gesture, posture, dress, labour, production, interaction with objects and manipulation of space are themselves implicated in the production of a gendered identity. Objects influence our 'performance', and we can manipulate our bodies through personal items (Johnson 2010). Since gender performance is by definition a repetition or citation of a precedent (Butler 1993), gender performance, as repetitive activity, is strongly material. Its material dimensions in archaeological contexts include architecture and personal objects and are understood as internal to identity creation. Butler's theories on gender performativity are useful in theorising identity, connecting material patterns with processes of identification, and interrogating the efficacy of agency in creating change. Butler theorised the formation of the subject, political routes to social change and the place of the material world in these processes (Bulger and Joyce 2012:74). The argument is, as a result, that archaeologists are in a position to document gender performance through the exploration of material culture.

Archaeologists who have successfully explored the material dimensions of gender performance include Joyce (2004), Gilchrist (2004), Hendon (2010) and Meskell (1999). Butler's work on sexualities, bodies and gender performance (1991) has had a particularly strong influence on queer archaeology in areas such as the examination of family and the division of labour (Voss 2008), identities (Joyce 2008) and sexuality and colonialism (Voss and Casella 2012). For example, Joyce's 2006 study of Classic Maya male-male sociality examined the predominance in Classic Maya visual imagery of all-male groups, in which young men whose bodies are largely exposed engage in competitive games, dances, and raids, often under the watchful eye of older male figures. Viewing these images as precedents for gender performance, Joyce argued that the embodied experience of gender was one of male-male sexuality. She noted the use of drawings of male genitalia in the Classic Maya writing system as the main component of the word for 'young man' and of a title displayed by some noble men.

3.3 Symbolism and Gender

According to the Oxford English Dictionary (2013:1718), a symbol is defined as 'something that stands for, represents, or denotes something else, *esp.* a material object representing or taken to represent something immaterial or abstract, as a being, idea, quality, or condition; a representative or typical figure, sign, or token.' Thus, the particularity of symbolic representation resides in the capacity of the symbol, the object, to evoke or suggest a meaning, belief, feeling or value related and appropriate to that principle (Childs 2008). From household and grave goods to the built environment, humans have inhabited a material world saturated with symbolism. Gender has had a profound influence on production and consumption of such material culture. The semiotic theory developed by Charles Sanders Peirce is useful in considering the ways people interpret material signs, such as artefacts, and how these can be material markers of gender identity and ideology. Peirce's semiotics (see Atkin 2013; Peirce 1977) begins with the assumption that all signs may relate to different kinds of meanings. In the simplest terms, Peirce's claim was that signs consist of three inter-related parts: a sign, an object, and an interpretant. Here, the sign as the signifier, for example, is gender. The object is whatever is signified, the object to which the gender association attaches, for example, a teacup or a pot. The interpretant, the most distinctive feature of Peirce's account, is the understanding that the individual (or indeed cultural group) might have of the sign/object relation. The importance of the interpretant for Peirce is that signification is not a simple dyadic relationship between sign and object: a sign signifies only in being interpreted. This makes the interpretant central to the content of the sign, in that the meaning of a sign is manifest in the interpretation that it generates.

While the Peircean frame allows for the multiplicity of meaning, it does not claim that multiple meanings may exist in the same instance and from the same embodied position, but suggests that knowledge is 'situated' (see Haraway 1988). Cognition occurs over time and in a chain of signification, so that each single idea or interpretation is a single segment in the stream of thought, which is locatable and even measurable (Bauer 2002). In Peirce's model, meaning is also relational and mediative, and these meanings

shift over time and between contexts (however, multiple meanings about context may exist within the same time frame). Thus, when an interpretant characterised by a symbol no longer exists, the sign no longer has any direct resemblance or connection to the object it once marked (Burke 1999:32). However, drawing on Latour's (1996) remarks regarding the complex relationship between subject and object, objects may mediate traditions and link generations through the inheritance of encoded meaning. Hence, artefacts can also serve as testimonial objects that carry memory traces of gender from the past and embody the process of its transmission (Hirsch and Spitzer 2006:353).

Gherardi (1994) adopted the conception of gender as something we do and something we think, but added the existence of a symbolic universe of masculinity and femininity as cultural and personal archetypes. This symbolic universe allows for an understanding of gender as located not only on the level of interaction and institutional conduct, but also on a level that involves symbolic structures and objects. However, such symbolic orders are not absolute or permanent. On the contrary, Gherardi invoked a number of feminist scholars to support the idea that the meanings of masculinity and the femininity are themselves transient and ambiguous, rather than hierarchical, binary opposites. This is not to say that hierarchy does not prevail in the gender dichotomy, only that this dichotomy is not necessary, fixed or pre-determined.

Reworking Peirce's model in light of Gheradi's views, 'finding' gender necessitates apperception of the chain of connection between an object (or objects and context), symbolic material culture, gender and an agent. The key to a 'gendered' meaning of material culture may hence also be a discourse-based approach to how material objects convey knowledge by and through our experience of them, as well as how artefacts were used and therefore held meaning for the people who used them. In this way the material culture that people lived with, that which archaeologists recover, is the material(s) through which concepts of gender were created, performed, continued, remembered and coveted. Thus gender is articulated through interaction with specific

forms of material culture, and can be expressed physically and symbolically via material culture. Gender becomes tangible through objects, structures and spaces, which are discursively involved in its creation, re-creation, order and interpretation. Hence 'material culture is therefore not just a source for the finding of representations of gender; rather, it is in itself implicated in the construction of gender at different levels' (Sørensen 2006:105). Miller (1998:33) argued that in making 'things' people make themselves, and that this is the foundation for a dialectical theory of culture.

These ideas can be demonstrated by way of the example of clothing, perhaps one of the most conspicuous and understandable examples of gendered material culture. In Japan, female kimono dressing, popular in the Tokugawa period (1600-1867) and now used for special occasions, is best described as a series of binding and packing garments for women. Fabric is literally wrapped around the body in several layers, secured by sashes and *obi*, with attached etiquette according to status, to achieve the ideal cylindrical female form, a 'correction' (*hosei*) (see Figure 3). Parallels can be drawn to European corseting of the 18th and 19th centuries, since both constrain the body to certain forms of mobility. Women in kimono reflected a portrait of middle or upper class urban women: neat, outwardly submissive and dependent, but also requiring an inner strength and stamina to wear the kimono well (Goldstein-Gidoni 1999:351). In this way the kimono not only shaped bodies and the perception of bodies, but also allowed their possessors to establish their place in society. However, an interpretation of kimono dressing must also take into account the notions of endurance and patience that are valued characteristics in Japanese society in general (Parkin 1978), particularly *gaman* (我慢強, enduring the

Figure 3: Some of the undergarments wrapped underneath the female kimono.

seemingly unbearable with patience and dignity) and *ganbaru (* 頑張る, to commit oneself fully to a task and to bring that task to an end). A closely related word, *kuro* (hardship), is regarded as part of the requirement of many social roles, including bride, mother, (male) worker, or hard-working student (Kondo 1992:45-46). Thus, the 'structural' analysis of a kimono as constraining garment, or men constraining women, is an appealing, but simplistic, explanation and is not satisfactory.

A more complete approach considers Geertz's (1973:93) statements that symbols are both models of and models for. The kimono creates 'Models of' reality: the principles of kimono wearing act as a blueprint or index for women's public form and serve to highlight the differences between women and men. As 'Models for' the kimono are templates for the reproduction of a coded public female form to guide the construction and enactment of female Japaneseness; both models of and for reflecting and mirroring the reality they produce. The alternative, more gender-nuanced interpretation offered here is embedded in the symbolic aspects of material culture. The kimono as material culture is a gendered artefact, but the kimono is a symbol that also constructs and influences the correct gendered behaviour as a model of and for correct womanhood through women's agency; here there is also Peirce's sign, object and interpretant; here is Bourdieu's performance through habitus and doxa; here is Butler's notion of performance. It is in this way all of these theories--agency, signs, habitus, doxa, and performance--inform and are different facets to a good analysis of the construction of gender. And because the interpretation of gender is so complex and multi-dimensional, gender stereotyping becomes entrenched and difficult to evade or transform. Material culture is, in this, and a myriad of other ways, a marker of gendered social relations, production, tradition, consumption and commodification, economic and political relationships, and more. Furthermore, material culture provides both a medium for the practice of gender and a resource, through which its negotiation can take place;

> in its operation gender uses objects and actions, and it is through its articulation in the material domain that gender differences gain a new reality.

> And it is here that we begin to engage with the link between gender and materiality. (Sørensen 2006:86)

3.4 Hierarchical or heterarchical gendered material culture?

Both gender and material culture are symbolic, but they are also hierarchical and thus hierarchies are represented symbolically through objects. Levy (2006) brought together concepts of hierarchy, heterarchy and gender to encourage a revision of notions of social complexity. Following Crumley (1995), heterarchy may be defined as the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways. Levy (2006) explained that heterarchy as a perspective is favourable to that of hierarchy, in that complexity and hierarchy are often conflated social relations. She argued that societies have fluid but orderly complexity that may or may not be ranked in a linear fashion, and that may be linked to concepts of scale. Such an approach also discourages narratives of the past that focus on society as a whole, which usually implicitly or explicitly focus on males or patriarchal systems as superior to others (Levy 2006:239). Because of heterarchy's emphasis on both lateral and vertical differentiation of relationships, however, it is a potentially useful concept in an archaeological analysis of gender as it also cross-cuts or reinforces a variety of reciprocal relationships that may be salient at different scales of organisation. For example, Mills' 1995 study of Zuni pottery and silver working took a heterarchical perspective on the two cross cutting systems of their gendered division of labour.

Levy's (1982, 1995) shifting study of burial hoards in Late Bronze Age Denmark has demonstrated the value of heterarchy as complementary to the examination of hierarchy, symbols and symbolism in gender archaeology. Her early work (1982) analysed these hoards as markers of hierarchy within a chiefdom, with the chief class marked by feasting and military objects, such as bronze shields. The analysis was on a large scale, comparing country-wide data and her implicit assumption was that the highest rankings (and objects) were held by men. Later reappraisal of the hoards (1995) informed by both the perspectives of gender and heterarchy, however, reconsidered the significance of the domination of ornaments (such as arm and neck rings, brooches, belt

plates). When analysed in terms of sets of ornaments, combinations and quantities, a variety of status positions became apparent. There was a degree of ranking, but rather than a top down hierarchy there were at least two or more aspects of vertical differentiation based on a number of factors, including economic, gender, locale, work specialisation and so forth. The ornaments, weapons and feasting items not only indicated social status but also probably symbolic significance.

3.5 Correlating artefacts and gender: presence–absence discourses

The classification of 'gendered' artefacts raises interesting complexities. What has been termed the 'gender-attribution' approach (Conkey and Tringham 1995, Dobres 1995) assigns artefacts to men or women based on implicit assumptions, usually about the division of labour, for example, men are associated with particular tools, or women are associated with pottery (Deetz 1965; Hill 1968; Longacre 1966). There are three main problems underlying such ascription of 'gendered' artefacts. First, such studies assume that women's material culture can only be recognised as a deviation from a male standard unless it relates specifically to women's clothing, hygiene or medical conditions, or to domestic activities that are culturally and temporally specific (Gilchrist 1994).

Second, studying a particular group and establishing their material correlates often results in circular reasoning and results in reifying universal gender roles or ideologies. This is most apparent in studies such as those by Flannery and Winter (1976) and Starbuck (1994), and even more recently by Allison (2006) and Robb and Harris (2018), which often resulted in 'women' emerging as a category rather than gender being seen as an underlying process. Gero and Conkey challenged such methods as early as 1991, questioning 'why is there a 'need' to 'find' females and not the same 'need' to 'find' males who are, by implication, already present, active, and the primary contributors to the archaeological record and the human past?'(1991:12; see also Baker 1997:188). Third, assuming artefacts are 'male' or 'female' does not allow for their shared use, the fluidity of tasks and labour or interactions between genders (Kent 1997; Vermeer 2009).

Previously, the identification of an artefact with a particular gender has resulted in the identification of a gendered individual or group in the past. For example, Gibbs discussed 'gendered' artefacts from an Australian whaling station site, particularly 'evidence of the female presence … in the associated "clothing manufacture" category, with the pins and thimbles generally seen as indicative of dressmaking or women's crafts...the small glass beads are unlikely to have come from the garments of a fisherman' (Gibbs 1995:306). Then, to account for a lower than expected number of bottle glass fragments, however, he then offers the following explanation: 'The presence of a woman and several children might also have moderated the drinking behaviour of other men at the station' (Gibbs 1995:304). Here, alcohol bottle sherds and thimbles are both indicative of gender, but in different ways– one is direct – 'women sewed', the other is indirect 'women affected the men's behaviour'. Gibbs does not feel the need to explore gender roles or agency further in this context or the patterning of artefacts with any deeper degree of complexity, other than to content that such artefacts indicate women's' 'control over the domestic realm' (1995:46). Gibbs' interpretation fits with dominant modes of thinking, with the author extrapolating from his own perceptions of stereotypical social norms for the past and present. His interpretation may indeed be correct, but no further questions are asked about the low number of bottle sherds (less access to supplies in a remote location? re-use of bottles?) or sewing equipment (men forced to sew their own clothes with the available materials?) If supporting historical accounts claim that no women were present, yet material evidence demonstrates that female-gendered activities were taking place then obviously someone at the site was 'doing' femininity, regardless of their biological sex. Instead, this activity could be interpreted as a material relationship between genders, the pins, for example, ultimately representing a combination of both masculine and feminine crafts. Accepting a range of normative categories of activity, such as sewing for women and alcohol consumption for men, as well as the assignment of an artefact or a space to one gender, is often done on the flimsiest of unexamined grounds. 'The need is to avoid an overly simplified classification of artefacts by function and type, and move

toward an emphasis on the individual and the behaviour behind the artefact' (Parslow 1993:44).

3.6 Context of action

The gendering of small finds and their spatial distribution has been used as a means to explore gender dynamics in various ways (De Leiuen 1998; Devonshire and Wood 1996; Lawrence 1998; Trocolli 1992; Wall 1994). This approach was developed in order to interrogate contexts in which gender cannot be established through direct reference and where therefore a number of inferences have to be made to introduce it as a significant research parameter. This approach was explored by Conkey (1991), who devised the term 'context of action' in reference to the need to place objects within their context of use to enable a tracing of the interconnections between different objects and the social relationships and identities invoked through their use (Conkey 1991). Such analysis makes a number of associations between artefacts and activities of certain types and then argues for links between specific groups with gendered activities.

On this basis, identifying the distribution and clustering of objects might provide the means of linking gender to the places in which such objects are found. For example, De Leiuen (1998) used the example of lithics on whaling station sites. Stone artefacts such as hammerstones and scrapers were associated with Indigenous Australian technology and Indigenous people usually carried out the activities associated with such artefacts. Historic accounts indicated that Indigenous women were exploited on these sites for labour by Anglo-American whalers and therefore these artefacts and their spatial distribution were used as markers for women. This association, rather than assigning gender to artefacts, was in principle based on the assumption that certain activities were culturally based but that gender was a process being performed by both men and women at these locations. No one material form designates gender identity; nor does an absence of "female" artefacts mean by default that women were absent from an archaeological context. The premises about consumption and activity, (categories that are culturally constituted), and the ways in which engendered relations and sexual identities are constituted in historically specific ways (Voss 2005), mean that

archaeologists cannot necessarily assume that particular categories of material always carried a particular status or gender value without detailed consideration of the assumptions involved in that reasoning (see Rautman and Talalay 2000:4).

3.7 Object biographies and gender

> I describe artefacts as 'social agents' not because I wish to promulgate a form of material-culture mysticism, but only in view of the fact that objectification in artefact-form is how social agency manifests and realizes itself, via the proliferation of fragments of 'primary' intentional agents in their 'secondary' artefactual forms. (Gell 2012:339)

It is argued here that 'gendered' objects are intrinsically *active*, that is, particular groups or cultures invented and made objects to help 'make' gender. Gell (2012) argued that social agency is a general attribute of objects, in that an object is a manifestation of intentionality. It is argued here that 'gendered' objects are further defined by the additional element of the object's socio-political agency or intentionality. This is not the same as correlating an object with either gender, i.e. a brooch with a woman. Objects become tools of social expression that are used in social behaviours. A 'gendered' object can be seen as being produced within a particular economy of material production, involving maker, material, circuits of production and distribution and end uses/users, as well as stylistics. These systems create a collective 'object biography'. Object biography considers objects as having lives, as Kopytoff (1986:66) explained, '[i]n doing the biography of a thing, one would ask questions similar to those one asks about other people'. The questions we ask of our objects to unravel their gendered dimensions should concern, for example, the objects' methods of production, modes of circulation, materials, producers and styles, not only the end user of that object. As such, an archaeological assemblage can also be a collective object biography, in that it focuses on the commonalities marking the group, rather than on isolated or individual examples, a focus highly suitable for understanding the nuances of gender-social processes vis-à-vis the Peircean semiotic. Susan M. Pearce (1994:2) argued that objects should not be studied individually but in groups:'[b]ecause objects (like everything else) are only meaningful in relation to each other'. So, for example, words are understood when

organised into a system of language; objects also function and make sense when viewed as part of a system of activity (Bartlett and Henderson 2016). Spector's (1993) work epitomises this approach.

While virtually all objects can be described as offering forms of culturally specific knowledge and communicating a message about gender, there are some objects that, as their primary purpose, produce, record, and distribute gender-specific symbols and knowledge, for example an engagement ring. A modified form of object biography may further draw out the nuances of gendered objects and the components of the gender systems, specifically concerning the different economy and styles that are brought into being. Object biography discusses objects via their 'production and use sequences', whereby materials can be considered first through how they become products via expertise and tools, and second, through their social circulation (Caple 2006:13). This approach 'directs attention to the way human and object histories inform each other… Meaning emerges from social action and the purpose of an artefact biography is to illuminate that process.' (Gosden and Marshall 1999:17). Exploring the context of objects further, in addition to circulating in different economies or social 'spheres', gendered objects also mobilise a characteristic set of aesthetic techniques to create contextual feminine or masculine style, which is another crucial element of the gender-active object. Prown (1993:4-5) related style as 'the way things are said, or done, or made…The configuration of a single object in its form. When groups of objects share formal characteristics, those resemblances or resonances constitute style'.

The theoretical concern then is how interpretative links are made between objects, social roles and identities, or how to read the gender 'sign' or the object biography as an interpretant. As Baudrillard (1996:9) pointed out, the distinctive nature of a system of objects is comprised by the relations among objects: how they speak to, and combine with, each other. It is perhaps through identifying these contextual, repetitious elements in assemblages of objects that gender may 'appear'. Direct and irrefutable evidence of gender in the archaeological record *is* elusive; however, but so too is

evidence of ideology, class, or status. While the range of social possibilities may inevitably exceed the certainty of our knowledge–even in contexts rich with historical evidence–gender might still be productively explored. Gender must be seen as a schema by which material environments order life experiences. In this way individuals are engendered by and from the objects around them, creating patterns in experience and social order, use and discard. In archaeological contexts these patterns are of primary importance, and elucidating and analysing patterned sets of material culture is key to a gender archaeology (Lesick 1997). Thus simply "adding women" (as a mnemonic for gender) to our interpretations and our understanding of past societies is not enough (Pyburn 2008).

To summarise, there is no one formula for reading and identifying gender in archaeology, although theories of semiotics, symbols, material culture, objects, practice, performativity, heterarchy, embedded bias and patriarchy are nonetheless critical concepts in terms of teasing out some of the many ways in which it might be approached (see Figure 6). All of these theories are complex; some of them have been used separately by researchers as a means of interrogating and understanding gender, others have been used in association with one another. They can all be seen as a different, but complementary ways of grasping what gender is and does. In this thesis they are linked and used together, highlighting the complexity of the creation, maintenance and interpretation of gender in archaeology.

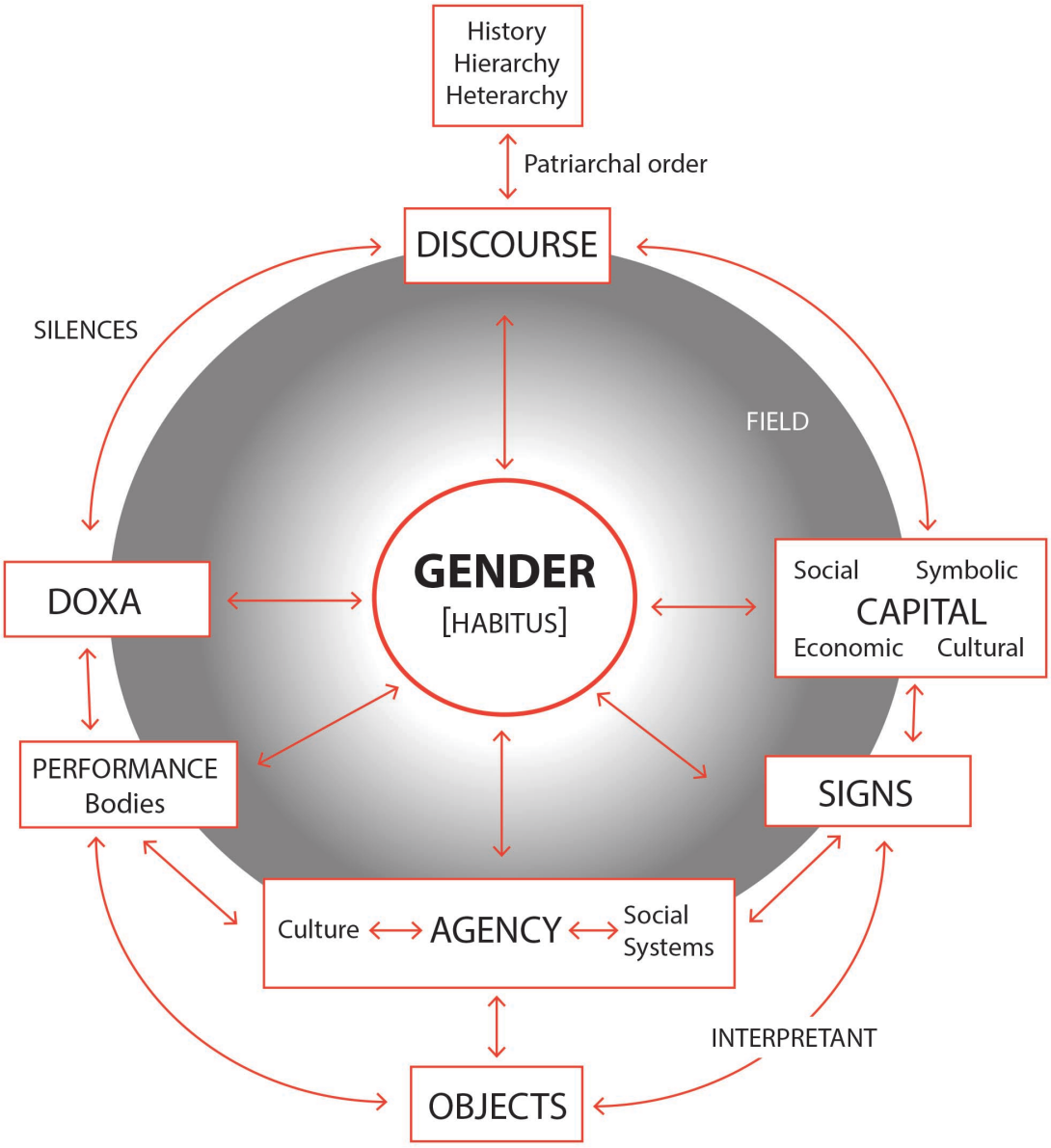

Figure 4: The complexity of the creation, maintenance and interpretation of gender

The next chapter outlines major intentions, contributions and frameworks of gender studies in archaeology. Gender archaeologies are represented by a multiplicity of approaches and individual experiences, with theoretical and research trajectories progressing in different directions in different countries due to the influence of varying cultural, political and institutional settings, as well as the 'uneven' uptake of the concept of gender itself. This 'unevenness' has resulted in the lack of a singular discourse on gender archaeology's heritage and evolution (see Lozano Rubio 2011). Perhaps the over-

arching connections that have brought scholars together under the 'banner' of gender archaeology are principally the acceptance of gender as a social construct and a concern to address sexism in the discipline (Dommasnes 1990; Nelson et al. 1994). Anti-sexism manifests in two ways: firstly by addressing inequality and discrimination within the archaeological profession and its workplaces. Secondly, by challenging and deconstructing androcentric discourses, and critiquing methods, assumptions and procedures by which patriarchal discourses omit or reduce women (and men outside the heterosexual and masculine stereotypes). They also expose the more insidious, structural expressions of misogyny, which, rather than making sexist pronunciations about women, instead present perspectives on the past from a masculine point of view as if such a position was sexually neutral and completely natural. In tracking a heritage, research gaps can also be identified, unfamiliar research traditions may come to the fore, and future trajectories of growth or decline can be identified.

CHAPTER FOUR

THE THEORECTICAL HERITAGE OF GENDER IN ARCHAEOLOGY

Understanding the history of any research area is important because it provides the context and frames of reference within which current research is situated. Perhaps more importantly, it is through the evaluation, use, and sometimes criticism of, research histories, that flawed paradigms, erroneous assumptions, and bias can be identified and countered. In doing so, important feedback can also be provided to our own discipline, leading to new and updated narratives (Dommasnes 2010:51). This chapter locates gender studies in archaeology within their broader historical context, from early efforts to make gender 'visible' to the establishment of gender archaeology as a feasible area of research. It traces the political processes, modes of representation, and major contributors in this area. This chapter also considers the provisional intentions and framework of gender studies in archaeology. It is also a literature review of the major works, contributions and representations of gender theory in archaeology. This is important as it summarises and emphasises the significant body of work that has been produced. It also serves as a point of reference for the results produced in the Chapter Seven of this thesis, as it is the link to the wider history of gender in archaeological thought. How, where, and when is this body of work reflected in the corpus?

Gender archaeology has been characterised variously as an approach (Hill 1998), a category of analysis (Díaz-Andreu 2005), a framework (Hanen and Kelley 1992), a theory (Preucel and Hodder 1996) and a counter-hegemonic field (Lazzari 2011). The degree of variation and ambiguity regarding the term is, however, not to be equated with a lack of conceptual precision. At the most fundamental level it is concerned with unmasking and challenging epistemic norms of bias and sexism and to some extent, both androcentrism and ethnocentrism. There is no monolithic, overarching regime of thought, no singular definition, but there is an intellectual genealogy developed from several perspectives

and localities. This is important in understanding what gender archaeology does, and enacts, as a form of praxis.

4.1 A genealogy of gender archaeology

The history of gender archaeology can be conceptualised as akin to a family tree; with roots based in feminism and both processual and post-processual archaeology, emerging in the 1980s, first in Norway, but then growing and influencing most strongly from the United States. Branches of gender archaeology have subsequently developed in many locales, some much stronger than others, with their own offshoots, for example, in Spain, which has a connected, but distinct and growing research tradition. Sub-disciplines such as palaeoanthropology also have specific branches, and are connected more strongly by research areas than geographical location.

Lozano Rubio (2011:21) has argued that the development of gender archaeology could be traced to the emergence and influence of feminism and the women's movement, but that it first emerged within processualism. Other 'histories' have argued that gender archaeology is the 'daughter' of post-processualism (see, for instance, Preucel 1995; Whitehouse 2006:739), but this is perhaps a Euro-Americanist perspective. In reviewing the epistemic principles driving gender archaeology it seems clear that it emerged within processual contexts, both expanding this school of thought's principles and exposing its limitations (Dommasnes and Montón-Subías 2012:375). The *Kvinner i Arkeologi i Norge (KAN*), [Women in Archaeology in Norway], established in 1985, became a venue for publishing papers dealing with gender issues, as well as papers relying on more traditional epistemologies (Dommasnes 1985). By adhering to processualist methodologies and to the belief in scientific objectivity, charges of bias could be countered (Dommasnes and Montón-Subías 2012:375). This strategy should not, however, be interpreted as an uncritical acceptance of processualism. In Norwegian archaeology, the critique of the status quo on gender in archaeology was then introduced from a feminist standpoint, combined with demonstrations of how and why processualist epistemologies were inadequate (Dommasnes 1985, 1987; Lillehammer

1985; Naess 1985). This came, in fact, a few years before the breakthrough of what is now known as post-processual archaeology.

Though gender studies in archaeology emerged from processualism, there are some obvious parallels and connections with post-processual archaeology:(a) context always remains imperative to analysis; (b) assumptions on meaning (in the past) are always politicised (in the present); (c) meaning is regarded in post-modern terms, as something that is created subjectively from a variety of texts by a variety of individuals, each arriving at the subject with their own politicised background; and, (d) activity takes place around individual experiences and therefore cannot be a 'universal truth' which can be applied to past cultures. Most importantly, however, is the conjecture that power is the 'central dimension of all social relations and that these relations are as constitutive of system level dynamics as is the environment in which the system is situated' (Wylie 1992:52).

In their 1984 paper *Archaeology and the Study of Gender*, Conkey and Spector argued that the study of gender could not be extricated from a feminist platform. It is important to acknowledge that the study of gender as an archaeological concern is inextricably linked to the rise of feminism. Feminism was directly responsible for the rejection of androcentric conventions and extended inquiry into subject areas that had previously ignored questions pertaining directly to women. Feminist critical theories and research within archaeology provided insight into the androcentric construction of both archaeological research and heritage management (Spencer-Wood 2011). A feminist archaeology thus differs from gender archaeology in that it specifically critiques androcentric interpretative biases and validates the place of women, either as subjects of study or as practitioners in archaeology (Geller 2009). Feminist archaeology also takes a political (feminist) standpoint and often examines power relations. As such feminist archaeology and gender archaeology are not isomorphic (Gilchrist 1999), but interconnected, and of the same 'family tree'.

4.2 Feminist archaeology

There is no simple definition for feminism; it is a diverse school of thought and one with a multitude of theories and exponents. As a starting point, the 1960s are often seen as the beginning of the broader feminist movement, a time when the identification of the causes of women's oppression and theories of patriarchy, power, as well as the seeking of personal equality were raised as political issues (Tong 1998). The history of feminism has been articulated by American feminists into three paradigmatic markers (Visweswaran 1997), summarised as the First to Third Waves of feminism. The most common characterisation of feminist archaeology is that it also followed these three main 'waves' (see Gilchrist 1999; Geller 2009). Nelson disagreed (2006:158) stating, 'the waves never existed, especially in archaeology.' The wave theory is also not particularly useful in tracing a research history, because it implies a linear progression of theories, or that one 'wave' finishes as another, better or more sophisticated or relevant, 'wave' follows, rather than co-existing or overlapping. It also presumes that Euro-American feminist theory has been taken up evenly across the globe. This is not the case, as issues of women's equity and visibility (first and second wave 'concerns') are still the primary issues for female archaeologists in some countries (see, for example, Habu et al. 2008; Palincaş 2010). Thus the major research trajectories in feminist archaeology are more usefully surveyed in terms of major themes and exponents.

Conkey and Spector (1984) are widely credited with the first paper to systematically examine the application of feminist approaches and insights to archaeological practice and theory (Wylie 1992). It was not the first feminist work in archaeology. In 1976, Dommasnes produced the first thesis on gender archaeology using feminist theory, examining the sexual division of tasks and ranks present in Late Iron Age Norway (600-1050 AD). She provided an evaluation of the differences in the tasks performed by women and men, finding that women appeared to work in areas related to textile production and harvesting, whereas men appeared to perform a larger and more diverse number of tasks. She also found evidence of women performing what were traditionally seen to be male activities, which were related to the wealth of women

settled in richer farm areas where it was possible to take over male roles (Dommasnes 1976). As pointed out by Nelson (1997:40), given that relatively few archaeologists understand the Nordic languages, the significance of this work and the proceedings of the 1979 Norwegian workshop '*Were they all men?*' went largely unnoticed and unacknowledged in the wider archaeological community until their later publication in English (Bertelsen et al. 1987). Dommasnes and Wicker (2010) have argued that the major overviews of gender archaeology have been viewed from an Anglo-American perspective, favouring English-language publications (hence perspectives) at the expense of other (this point is elaborated further in section 4.11).

Prior to both Dommasnes' and Conkey and Spector's publications, Sally Linton proposed the theory of 'Woman the Gatherer' in 1971. Perhaps the first feminist reaction to the 'Man the Hunter' paradigm, Linton criticised Washburn and Lancaster's (1968) complete disregard for the contributions of women to human evolution. She presented a different view based on the central status of the mother-infant bond and an alternate explanation of human evolution in which the gathering, carrying, and food sharing of early hominin females was the basis for food sharing, tool use and innovation, and the evolution of human cognitive capacities (Linton 1971). Linton also argued that baskets and slings for carrying infants and food were the first tools invented by our hominin ancestors. Linton and the theory of 'Woman the Gatherer' was one catalyst for many feminist archaeologists who made their own unique contributions to our understanding of women's role in human evolution.

It was also in the 1970s that Sandra Bowdler published 'Hook, line and dillybag' (Bowdler 1976). This paper was one of the first to make women visible, as well as suggesting a new explanation for a dramatic change in shell and fish species represented in middens on the Australian coast. Previous explanations for this change had mainly relied on changing environmental factors, but Bowdler linked the changes to the introduction of women's technologies such as shell fish hooks and lines, as evidenced by ethnographic accounts. Often ignored in standard histories of archaeology (for example,

Renfrew and Bahn 2004), Bowdler and Linton (amongst other women), made important methodological and theoretical contributions and worked hard to include women's participation in academia, as well as to make women in the past subjects worthy of research.

Around the same time, inequalities and male bias across related academic disciplines such as anthropology were highlighted (for example Rosaldo and Lamphere 1974). Socialism also had an impact: Marxist-feminist Rubin (1975) drew on Engels' (1972) separation of reproduction from production to develop the concept of the sex-gender system through which she articulated the interrelatedness of gender and sexuality. Marxist theories about social relations made research about women, reproduction and production popular. Scholars who followed this approach in archaeology (particularly within historical archaeology) came much later and related it to class, the structuring of power and modes of production (for example, Little 1994; Scott 1994). Marxist-feminist frameworks guided research in a number of non-English speaking former communist countries which have also been largely ignored; notable works were produced in the former USSR (Chard 1960; Soffer 1983), China (Hu 1970; Qian 1981; Shelach 2004; Zhang 1985) and North Korea (Li 1992; and for review see Nelson 1995).

Theories of patriarchy also gained momentum and influenced discourses such as those on the role of women in human evolution. Nelson (2006:12) explained that the feminist critique of the patriarchal system (both broadly and specifically in archaeology) grounded gender theory in archaeology. One effect was recognition of the ways that women in the past were ignored or trivialised in archaeological discourse (Conkey and Spector 1984); another effect was to highlight how philosophical critiques, including the 'micro-politics of archaeology shape the directions and results of inquiry' (Wylie 2002:188). Wylie charted such critiques using four categories. The first is erasure, whereby research questions that are deemed important obscure issues of gender and render women entirely invisible. Gero's (1993) discussion of 'early man' studies in North America is an example of this type of critique. She showed how the paradigm of early

man as defined by projectile points and hunting leaves women out entirely—both as subjects of research and as researchers. The second critique noted by Wylie is distortion, the 'projection onto prehistory of presentist and ethnocentric ideas about sexual divisions of labour and the status and roles of women in prehistory' (Wylie 2002:187). For example, Brumbach and Jarvenpa (2006) demonstrated how current attitudes towards, and beliefs about, hunting actually distort the roles of women in many cultures. The third critique is political resonance. When an interpretation agrees with cultural ideas of the present it is not likely to be questioned. For example, McCafferty and McCafferty's study (2009) pointed out the gender 'blindness' that was evident in the attribution of gender based on grave goods, despite contradictory skeletal evidence at Monte Albán's Tomb 7. The ''politics of objectivism'' is the fourth type of critique. Wylie described this as the 'the systematic silences and replication of stereotypes' (Wylie 2002:187), for example, assumptions about gender roles in early modern humans (Roosevelt 2002).

Many of the first applications of feminist archaeology had a critical edge and found androcentric bias (see Watson and Kennedy 1991). Spector (1991, 1993) explored the power of narrative 'ethnography' through a decorated awl and a girl's transition to womanhood among the Dakota. More than just a story, Spector's account is one of a few examples of a hermeneutic approach in North American archaeology (see Preucel 2010). A review by Conkey and Gero (1997) emphasised the importance of feminist theory and the feminist critique of science for the practice of archaeology, including issues of agency in knowledge production, the organisation of research projects and the acknowledgment of ambiguity.

One 'offshoot' of feminist research has been the consideration of multiple or ambiguous genders (Alberti 2013). The work of Judith Butler had also been particularly influential in the areas of sexuality, embodiment and queer archaeology (see Joyce 2000; Schmidt and Voss 2000). Publications such as those by Meskell (2002) on social identity, Joyce (2005) on the body, Dowson (2006) and Voss (2008) on sexuality, and Alberti (2001,

2006), Ardren and Hixson (2006) and Knapp (1998) on masculinity, also demonstrate the value, scope and expansion of a feminist platform. Feminist-inspired studies of gender's intersection with ethnicity, class and race had also emerged. Conkey (2005), for example, outlined the potential of an intersectional approach melding feminist and Indigenous concerns. Contextual archaeology (Beaudry 2006; Wilkie 2003, 2010), practice theory (Gibb and King 1991; Peelo 2011), performance (Joyce and Loppario 2005) and queer theory (Voss 2008, 2012; Blackmore 2011) are all applications of feminist-based archaeology. Within a post-colonial framework race, ethnicity, gender, sexuality, class, or authority all coalesce into an all-encompassing cultural relativism, a 'creation of subjectivity' (Gilchrist 1999:2). The edited volume by Voss and Casella (2012) exemplifies this approach by its examination of the connectedness of sexuality, colonialism and imperialism. The focus shifts from gender *per se* to the material implications of sexuality. Several feminist-inspired archaeologists have drawn from their own marginalised positions, personal experiences, and embodied differences to pose questions that diverge from traditional inquiries about race, ethnicity, or sexuality (Battle-Baptiste 2011; Franklin 2001; Sterling 2015). Spencer-Wood (2011) provides a substantive summary of the many strands of major feminist theories on constructions of the past and archaeological thinking.

4.3 The impact of Conkey and Spector's Archaeology and the Study of Gender

Despite earlier works, the publication of Conkey and Spector's *Archaeology and the Study of Gender* is a defining point in the historiography of gender archaeology. This paper posed a powerful set of challenges to traditional interpretations of the past, arguing that androcentric and Western bias had distorted the interpretation of both men and women's roles. Their aims, as summarised by Hays-Gilpin and Whitley (1998:5), were to:

1. Explain why gender must be included in archaeology;
2. Demonstrate where gender stereotyping had led to 'bad' science;
3. Suggest future research directions.

From case studies, Conkey and Spector provided evidence that contemporary models of the sexual division of labour were assumed to be universal and projected back into the past (Conkey and Spector 1984:14), concluding that women's contributions to the archaeological record had been either mythologised or ignored. They also highlighted the possibility for cross-cultural variability in gender task differentiation. As argued by Nelson (1997:40), because the authors had established reputations and as this research was published in a respected archaeological journal, *Advances in Archaeological Method and Theory,* their ideas gained credibility. Thus, as a 'serious' piece of archaeological work, it marks the declaration of feminist and gender archaeology as a valid academic, rather than 'fringe', concern (Hodder 1982, 1986). It was also one of the first published accounts to introduce the term gender, as distinct from sex, into archaeological vocabulary. Further, the paper raised an array of issues and central questions that archaeologists are still exploring and are fundamentally important in the present.

Conkey and Spector's (1984) call for the critical evaluation and expansion of research into women triggered, or perhaps legitimated, research interest in the area. Soon afterwards conferences and sessions at professional meetings took place that in turn generated published proceedings. The 1989 *Chacmool* conference (and the subsequent publication edited by Walde and Willows 1991) was one of the first truly international gatherings on gender archaeology. The subsequent *Boone* (see Claassen 1992) and *Women in Archaeology* (see du Cros and Smith 1993) conferences demonstrated the diversity of topics and worldviews. Although not all papers were 'feminist', they are, in retrospect, a 'raw' reflection of the optimism and enthusiasm at the potential of a feminist archaeology and employment equity for women. Both statistical and anecdotal data were collected that demonstrated the systematic ways that women archaeologists were disadvantaged in the discipline (Nelson et al. 1994). As a result of such convincing data, many women became politically active on behalf of women and other underrepresented groups within their workplaces, whether or not they added gender questions to their own research.

The edited volume *Engendering Archaeology* (Gero and Conkey 1991), brought together fourteen papers under an explicitly feminist banner, with the goal of exposing the male bias in archaeology by trying to find the archaeological signatures of women in the past. This is a significant work, in that many authors presented striking re-evaluations of standard discourses in prehistory (see, for example, Brumfiel, Gero, Hastorf and Tringham's contributions).

4.4 'Finding' women and gender in the archaeological record

Redressing 'misinterpretations' of gender had been a primary motivation of early feminist archaeologists, such as Barber (1994), Ehrenberg (1989), Gero (1985), Kehoe (1983), and Watson and Kennedy (1991), in order to remedy women's 'invisibility' in the archaeological record rather than analyse gender *per se*. 'Finding' women was a starting point and, as argued by Knapp (1998:242), this so-called 'remedial' research was very often necessary in order to expose the androcentrism of existing research. Some of this work had been labelled relatively naïve, gynocentric and dualistic (Geller 2009), merely 'adding' women to existing 'patriarchal' models of the past, yet, as discussed by Balme and Bulbeck (2008), it was an essential step for dealing with issues previously ignored and addressed the issues of bringing both women and gender 'into view' by actively perceiving them as subjects of archaeological inquiry.

Conkey and Spector (1984:6) argued that 'the archaeological 'invisibility' of gender in archaeology was more the result of a false notion of objectivity and of the gender paradigms archaeologists employ than of an inherent invisibility of such data'. Questions which might bring gender into archaeological focus were just not asked, and as a result there was no context for gender to inhabit; 'while it is true that most of the available archaeological record precludes the identification of either women or men as its producers, almost all archaeology done until the late 1980s and early 1990s assumed male was the default sex when interpreting empirical data' (Lazzari 2003:202). In the absence of context, it was then simplest to revert to apparently objective gender archetypes based in historical and androcentric science. Following Hawkes (1953), Conkey and Williams (1991) critiqued such approaches in terms of a 'hierarchy of

knowables', whereby some things are perceived to be more or less recoverable (or 'factual') archaeologically, while 'the more social, symbolic, religious, and spiritual are thought to be increasingly inaccessible' (Conkey and Williams 1991:108).

Scott (1997:3) argued that pseudo-inclusion of gender was more widely practised than overt exclusion, taking the form of the tokenistic inclusion of women for form's sake. She asserted that women appeared inconsequentially in archaeological narratives through androcentric categories, such as wives, mothers and prostitutes. One example of such a narrative is a paper by Albrethsen and Brinch Petersen (1976) on burials in the Mesolithic Vedbaek cemetery, Denmark. They discussed women in their interpretations of sacrificial victims; women are considered, but only in terms of their direct relationship to males and as their victims. Grave goods (tooth beads, human teeth, deer and pig teeth, and some animal bones) are interpreted as 'decidedly female' (used for jewellery?) and the authors use these gender assumptions to conclude that 'the wife and child have had to follow the husband in the grave, and the blade knife below the woman's chin might symbolise the weapon with which they were slain' (Albrethsen and Brinch Petersen 1976:22). Such assumptions highlights another problem associated with gender in archaeology: that children are also often invisible in archaeology or inappropriately allocated to an adult male/female gender, frequently the 'women and children' group. As pointed out by Baxter (2005), children are often regarded as a presumed burden that prevents women's engagement in other activities. Motherhood is also a culturally constructed category, as is child. The dearth of directed studies on childhood and gender seems to be the result of a consensus view that identifying them archaeologically is impossible or that they are unproductive and dependent and therefore do not produce distinctive archaeological signatures (but see Baker 1997; Baxter 2005, 2007; Deverenski 1997, 2000; Kamp 2001; Lillehammer 2010; Moore and Scott 1997; Romanowicz 2013). Perhaps it is also linked to the fact that many archaeologists have not been interested in children as a subject for serious research, or even as a separate category to women. Similar omissions are evident in the attention paid to the elderly in archaeology, and especially elderly women. Only a partial

understanding of past communities can be obtained through the ignorance of the unique roles and archaeological signatures of such specific cohorts.

A key concern then of this dissertation is the identification and analysis of how archaeologists have, and may continue to, engender or de-gender the past in unintended ways that produce versions of social relations that project their own versions of gender (and agency) (Lozano Rubio 2011). Feminists have highlighted the ways in which many male researchers rarely see themselves or their work as being 'gendered'. Most of the principal contributors in the area of gender archaeology are women (see Claassen 1994; Hamilton, Whitehouse and Wright 2007; Williams 1981), and it could be argued that women are generally more conscious of being 'gendered', particularly in a traditionally male field such as archaeology. As Pyburn stated, 'it is harder to notice we are patronizing other people than to recognise when we are being patronised ourselves' (Pyburn 2008:122). As a result, it has been largely women dealing with gender at conferences and writing about gender in publications to forge a well established, but arguably still marginal, field of archaeology.

4.5 Key themes: power, feminism and gender archaeology

> This is what the study of gender, class, and race is really about. How subordinated sectors accommodate to and resist the power of privileged sectors, how privilege (like resistance) is camouflaged, how power is earned, learned and occasionally spurned. Just as the reality of male privilege affects the lives of every woman, whether she is conscious of it or not, the concept of power is by definition a factor in every feminist's research. (Wolf 1992:133)

Notions of power are implicit in much of the analysis and discussion in this dissertation**.** Following Burke (1998:8), power is understood as 'a set of relations between individuals and groups, yet a powerful group may well be powerless in another'. Power had been a research theme in many facets of archaeology, and prior to the 1980s tended to focus on relationships between large social groups in a society or between authority structures (Sweely 1999:1). Hierarchical, dominant groups, 'complex' and 'primitive'

societies and people were studied from Western classification systems and historical perspectives. Power was often only recognised when it entered the (male) public arena; official or formal power–ritualised conceptions of overt control and political manipulation–dominated academic studies (Wylie 1992:56). Male academics had been more interested in researching overt power—warfare, hunting, leadership (see Conkey and Spector 1984:4), with covert forms of power relegated to the feminine (women's interest=less interesting), and therefore, less studied. Those influenced by feminist thinking shifted their focus from dominating groups to interpretations of relational power (see Wylie 1992). Within the broader feminist movement the focus on power was particularly strong.

As Marxist-Socialist feminists examined capitalism, Radical feminists built on the gaps in their work, believing that the subordination of women was the primary form of domination. The New Left focused on power in regards to the theory and organisation of work, and sought to link issues of interpersonal power to the larger social and economic structures in which these powers operated (Eisenstein 1984:130-131). Diverse feminist visions emerged from such work of Firestone (1970), Millet (1970), Greer (1971), Mitchell (1974) and Z. Eisenstein (1990), with the aim of having feminism, feminist issues and priorities permeating various organisations, disciplines and individuals. Feminist standpoints on power influenced (amongst others), for example, Brumfiel (1991), and McCafferty and McCafferty (1988) in their assessment of power and women in Aztec Mexico.

Paynter and McGuire (1991) adapted Wolf's (1990) four modes of power and proposed the notions of 'power to' and 'power over'. This approach builds on the earlier work of Giddens who defined power as 'the use of resources, of whatever kind, to secure outcomes' (Giddens 1979:347). Power 'to' is power that is able to be transferred, present in all social relations and involves power 'over', which is a relationship of domination. 'Power to' was exercised in powerful institutions (such as universities), and accounts for the unequal distribution of power and authority in academia, at that time,

as universities were part of the male 'sphere'. Put simply, the powers in archaeology had been men and so research directions were governed by male interests; 'It is easier to study formal authority than informal power, and the idea that men's interests and activities are everywhere more important to society has distorted the observations and the theories of social scientists' (Barwick and Bell 1979:179).

Foucault's theories on power (1970, 1972, 1976, 1977, 1980) had broad impact across the humanities, contrasting traditional liberal and Marxist theories of power. He explained power as emanating from a variety of sources that impact variably on each context it is exposed to, and gender—both as external projection and internalised experience–is but one source. Foucault (1976:94) stressed that 'power is not an institution, and not a structure; neither is it a certain strength we are endowed with; it is the name that one attributes to a complex strategic situation in a particular society' and, '[p]ower is relations; power is not a thing' (Foucault in Lotringer 1996:155). Such concepts underpinned work in archaeology including, for example, studies by Little and Shackel (1989) and Paynter (1989). One of the most important features of Foucault's view in terms of archaeology is that mechanisms of power produce different types of knowledge, which codify information on people's activities and existence. The knowledge gathered in this way further reinforces exercises of power. If individuals or members of a group can use their ability to manipulate knowledge in order to achieve aims or further the interests they hold, they are *powerful* (Scott 1996:124). Power is only considered as contentious once difference is recognised, and the exact meaning of what constitutes difference – or the knowledge thereof – is utterly subjective. Hence, gender as a *source* of power is subjective in interpretation, expectation, and location. Factors such as gender, age, race, ethnicity, religion, sex, and status all play some part in the maintenance of power relations.

One of the key works on power and gender in archaeology is Nelson's 1997 text, *Gender in Archaeology: Analyzing Power and Prestige*. Questions were raised as to how a division of labour is representative of a division of power and whether the traditional

perceptions of an active (e.g. political, hunting) or passive (e.g. childrearing, gathering) contribution to social structure warranted unequal access to that power. Sweely's (1999) edited volume '*Manifesting Power: Gender and the Interpretation of Power in Archaeology'* brought together significant scholarship from the Americas on the issue. Drawing on the work of Butler, Joyce (2000) also examined gender and power relations in pre-Hispanic Mesoamerica, arguing that the archaeological evidence of gender roles were more varied than was depicted in Mesoamerican art. Pyburn (2008) also analysed power and gender from a feminist standpoint in Mayan households.

4.6 Key concepts: the division of labour and technology

> In the 1970s when women's work was acknowledged, it was usually simply stereotyped as baby, childcare, and household maintenance along with some 'crafts.' These attitudes are rooted in biological essentialism. The only absolute universal is that women give birth to babies. However, even that is not true of all women and certainly is not true of any woman all her life. Thus, the fact that women, not men, give birth cannot explain everything about gender differences and cannot explain anything about differences among women. (Nelson and Rosen-Ayalon 2002:4)

The sexual division of labour remains a key concept in terms of gender in archaeology and was also one of the first intellectual issues widely debated in modern feminism. Early feminist anthropologists investigated how (and if) aspects of biological, social, and political gender are reflected in or created by the sexual division of labour (for example, Eriksen and Nielsen 2001; Moore 1988; Rosaldo and Lamphere 1974). Indeed, the core concepts of time and material have both been segregated along gender lines. As Stimson and Stimson (1997:38) argued, there are significant differences in the perceived orientations towards time, 'women traditionally maintain the present while men explore and test possible futures', leading writers such as Washburn and Lancaster (1968) to assume males were the primary contributors to human progression. The result was that the female contribution in terms of the sexual division of labour remained irrelevant and uninterrogated until the 1970s and most archaeologists projected their

modern conceptions of gender roles into the past: 'the gender roles prevailing in the archaeologist's time have pervaded so much of the body of "knowledge"... it is difficult to see how such an unhealthy past could have gone unnoticed for so long. As the evidence for gender roles is woefully incomplete, contemporary social influences push 'comfortable' interpretations' (Hurcombe 1995:87). Further, as Gilchrist (1999) explained, such biased interpretations crept into archaeological practice, where, since one now implied the other, researchers did not look for evidence of gender but for evidence of labour:

> The 'materialist' basis of archaeology has promoted an interest in productive roles that may have over-simplified the relation between gender and the sexual division of labour. Indeed, attempts to make gender more visible in the archaeological record have proceeded on the assumption that an exclusive sexual division of labour was present. A conflation of sex and gender, labour and production has resulted, with the common assumption that the function of gender is to organise labour (Gilchrist 1999:31).

Primatology has also been criticised for its projection of gender roles onto animals, which, in turn, is filtered back on to humans to validate observed gender relations amongst men and women (Wylie 1991:39). Evolutionary anthropologists often reflected apparent gender alliances and conflicts between primates on to possible interactions between early human species (see Hagar's edited volume 'Women in Human Evolution' (1997)), and the biological strategy of sexual dimorphism is sometimes seen as underpinning male-female power dynamics (Hurcombe 1995:96). More recent work by Wilbanks (2008) explains that, in fact, of the cases of making and utilizing tools for hunting mammalian prey among the Senegalese chimpanzees, most of the tool making and use was carried out by females and immature individuals (Pruetz and Bertolani 2007). This evidence directly counters prevailing theories which cast males as the primary hunters and toolmakers and thus the first to exhibit this behavior. These findings also support the assertion made by some researchers that females played an important role in the evolution of tool production and use (Pruetz and Bertolani 2007).

The '*longue duree'* approach and the use of ethnographic studies led to scepticism about whether 'gender' could be found in the past because 'women's work' was invisible. For example, gathering, which involved vegetal matter and containers of basketry or hide, did not leave 'hard' traces in the archaeological record like men's work (animal bones and projectile points). One of the first archaeologists to provide evidence contra to this assumption was Kehoe (1990), who provided evidence of various hunting strategies in the form of traps and snares that may have been pursued by women that had been overlooked in favour of stone tools and their manufacture. Gero (1991) insisted that gendering stone tools as products created by males only was itself an unwarranted assumption—women may have made and used 'utilised flakes' that were rarely studied from archaeological collections, and might have made their own tools, such as scrapers, since hide working was thought to be women's work. While the discipline has moved to more detailed and complex studies of women as toolmakers, this foundational work continues to be important.

The question of women as hunters has been explored in various ways. Bird (1993) showed that ethnographic evidence for women as the makers of stone tools had been overlooked, and Smith (1991) examined how women were overlooked as producers of rock art by Australian archaeologists. Spector's (1983, 1993, 1998) work on the Hidatsa had found evidence for gendered task differentiation and for the differential use of space by each gender. This has become one of the most popular approaches in the determination of gendered roles within the archaeological record (Claassen and Joyce 1997:85; Hill 1998:103). Frink and Weedman's (2005) edited volume highlights the highly diverse and gendered nature of hide working and production across cultures. In terms of technologies, Ward (2006) and Zihlman (1981), for example, postulated that the first tools created by our hominin ancestors were digging sticks that were invented to help mothers carry their offspring. Not only do women in modern foraging societies make and utilise digging sticks more than men (Ehrenberg 2001; Hart and Sussman 2005), but also the creation and primary usage of these tools by hominin females would have followed the overall primate pattern. Wooden digging sticks have been found in association with australopithecine fossils and were one of the first tools that we know

our hominin ancestors utilised to obtain underground tubers and rhizomes (Ragir 2000).

Balme and Bowdler (2006) have put forth an argument for the role of gender in the colonisation of Australia. They make a case for the division of labour based on their belief that gender is a characteristic of all modern hunter-gatherer societies in which primarily men hunt and women gather. They acknowledge that with the exception of hunting large aquatic fauna, there are no constraints imposed by female reproductive activities on carrying out any task performed by men. The only real constraints are social rather than biological:

> A gendered division of labour as a means of production is organized in a social and symbolic way that is neither biologically determined nor purely economic. This does not preclude the suggestion that the human division of labour is an adaptation to the requirements of child rearing but, if it is an adaptation, we suggest it is a social one. Such organization is only possible when there is an idea of 'woman'…one of the defining characteristics of human society, a patterned sexual division of labour as a structuring principle, is organized according to social and symbolic constructs and is, in fact, a division of labour by gender (Balme and Bowdler 2006:399).

There is much scope for contesting such a conclusion about the division of labour among hunter-gatherers (see, for example, Brumbach and Jarvenpa 2007; Dobres 1988; Gero 1991; Gilchrist 1999; McKell 1998; Peacock 1991; Sassaman 1998; Vinsrygg 1987; Wadley 1998; Zihlman 1998) particularly in terms of its projection of modern (western) concepts of gender on to the deep past. Davidson and Noble (1992) have set out an argument for the necessity of language in the colonisation process, but Balme and Bowdler take this further by making the case that it was actually a gendered division of labour (for which language is a prerequisite) that allowed adaptive success of anatomically modern humans and the colonisation of Australia. In their opinion this is due to a structured system of resource exploitation—presumably based on fish, shellfish and plants that could be gathered—which they attribute to females (Bowdler 1990:333). This would have allowed males to hunt or explore as part of dual (co-dependent)

strategies. In other words, Balme and Bowdler argue that a division of labour by gender enabled a system of exploitation and a flexible subsistence economy that allowed colonisers to successfully adapt and move across unfamiliar ecosystems. Balme and Bowdler raise important considerations about the role of gender in such processes as colonising new lands, an area where discussion on gender or women as active participants in this process is traditionally absent. The contribution of this paper is also significant in that it considers gender as a major theoretical and processual factor rather than being only site specific.

It is also noteworthy that the assumptions made about the sexual division of labour in the development of agriculture are also often assumptions linked to the concept of nuclear families. As Peterson (2002:2) pointed out, nuclear families 'make sense' to archaeologists because biological differences linked to culturally defined roles demarcated distinct spheres for male and female labour, 'the dyad of one male and one female provides a complementary productive and reproductive unit'. In other words, the concept of a nuclear family, as primary socio-economic unit, implicitly assumes a sexual division of labour was already in place, as hunter-gatherers moved to farming. While the organisation of work and family groups is a key factor in the development of agriculturally based communities, researchers such as Peterson have countered ill-supported ideologies based in biological essentialism. Using bio-archaeological data, Peterson (2002) attempted to integrate social variables into models of agricultural development and to tease out work patterns that provide evidence of male and female activity. In a similar vein, the recent volumes by Agarwal and Wesp (2017) and Geller (2017) challenge both the theoretical and methodological basis for sex assignment from human remains, and examine the impact of gender roles on the body.

4.7 The gendered division of labour within the archaeological discipline

Central to a discussion of the division of labour and gender archaeology is the highly gendered nature of archaeology's disciplinary culture. This has been characterised as distinctively male (see Moser 1995, 2007; Smith and du Cros 1995; and Smith and O'Donnell 2006) and is worth elaborating upon here. In the 1990s feminist

archaeologists highlighted the issue of the archaeological discipline promoting and rewarding those aspects that are spectacular or sensational (Moser 1996:81) and which play towards the (very public and very male) stereotype of adventure, discovery and control over the past. Both Moser (1996) and Gilchrist (1999) pointed out that there is usually limited recognition for important but less dramatic archaeological conclusions and that it is no coincidence these can most often be attributed to female researchers. Building on earlier work by Gero (1985), Moser and Gilchrist both noted that female practitioners (in general) were relegated to less 'active' studies that involved laboratory or survey work, and seldom participated in exploring the whole circumference of research areas. They echoed instead the traditional and long-standing anthropological notion of division of labour according to sex: men 'hunt' for the 'oldest, deepest, most unique' (Wylie in Moser 1996:819) treasure that requires technology and skill, while women 'labour' over the landscape and small details (Moser, ibid, see also Gero 1985, Conkey and Gero 1991).

Although this type of analysis according to gender is very much in tune with early so-called 'second wave' concerns, the arguments made are still relevant to writers who continue to see the bias in operation (see, for example, Bowman and Ulm 2009; Clarke and Phillips 2011; Geller 2016; Politis 2001; Smith and Burke 2006). While the number of archaeological practitioners is more equally gender balanced in the 2010s, the point must be made that investigations into the sexual division of labour (which both male and female archaeologists have conducted), are suggestive of deeply entrenched, simplified misunderstandings of gender identities, activities, and relationships in the past. Further, to study sexual or gendered division of labour does not make one a feminist archaeologist. There is a semantic, theoretical, and political difference (Geller 2009:72–73; Hegmon 2003:218–219).

4.8 Maintenance activities

Since the 1990s, a number of Spanish archaeologists have been working on the concept of 'maintenance activities' (see Alarcón 2006; Bardavio and González Marcén 1996; Colomer et al. 1998; González Marcén et al 2005; González Marcén and Montón-Subías 2009; Montón Subías 2007, 2010; Montón Subías and Lozano 2012; Montón Subias and Sánchez Romero 2008; Picazo 1997; Sánchez-Romero 2008, 2011, 2014). The approach takes a Marxist feminist standpoint on women's work and the material conditions of their existence. The concept includes activities related to the management of everyday life and the well being of community members (Montón Subías 2010:23). Implicit, or perhaps implied, is that these activities are performed by women. Maintenance activities include caregiving, cooking and food preparation, cleaning, basic weaving and cloth manufacture, hygiene and public health, the socialisation of children, and the fitting out and organisation of domestic spaces, and 'to the basic tasks that regulate both the course of human life and social stability on a daily basis, and are therefore crucial for the reproduction, cohesion, and welfare of human groups' (Montón Subías 2010:24).

The specific types of maintenance activities are not always the same, but vary depending on chrono-geographical conditions (González Marcén et al. 2008:4), but it is argued that there is continuity and/or similarity with respect to the core relations and practices articulated. These activities always entail specialised knowledge and the ability to sustain networks of interpersonal relationships in the framework where they take place. They are also associated with specific technological practices and with the existing values and norms operating socially (González-Marcén et al. 2008:5). The approach of maintenance activities also emphasises the structural character of these activities through repetition and reoccurrence.

An example of how the 'maintenance activities' approach is undertaken was described by González-Marcén, Montón-Subías and Picazo (2008:5-6). In Bronze Age and Early Iron Age peasant communities in the Can Roqueta, Colomer, settlements were spatially

organised in relation to maintenance activities and the related production processes of artefacts. They found that during the Bronze Age, community settlements were based around 'maintenance' infrastructure but scattered randomly. During the Iron Age, settlements were structured around production, consumption and possibly rest areas and there was an increase in cereal production. This increase was not associated with technological innovation (which had remained unchanged), but with a reorganisation of daily life that could only have taken place due to changes to maintenance activities. In other words, the agricultural intensification was probably accompanied by a demographic increase. The authors argued that an increase in population occurred at the 'expense' of women, either through a relaxation of birth control or due to improved conditions for infant survival. Either each woman had more children (with possible changes in family structures) or the maintenance activities related to the general health of the group managed the outcome of lower infant mortality.

Advocates of this approach have argued that, despite their importance, the technologies involved in maintenance activities have seldom been regarded as a social-technological system worthy of analysis because they are associated with women (Montón Subías 2010). A recurrent debate has thus referred to the nature of the association between women and these practices (Picazo 1997:60; González et al. 2008:3; Lozano 2011:31). Critics observe that the attribution of certain activities to the daily practices of women is debatable and has tended to be linked with essentialist or conservative points of view that place women in a limited and limiting scope of social action (Magallón 1999). Montón Subías (2010) argued in turn that highlighting the significance of maintenance activities is not tantamount to attempting to perpetuate women's role in them; it simply means to acknowledge the importance of such activities throughout history, along with the fact that, in most historical contexts, they were performed by women. Although the principles of maintenance activities may be a sound framework for those working in a European or post-colonial context, the applicability of such an approach to Indigenous cultural practices globally (especially for studies in deep time) may be problematic, given the differences in world views, task differentiation and technologies.

4.9 Household archaeology

Congruent to theories on maintenance activities is the body of work on households, as both are often a locus for discussions around gender, and particularly women, in contexts of production and consumption. Households are important in archaeology because they are the minimal unit of social reproduction and a basic unit of society through which people interface with broader social, economic and environmentally adaptive structures (Ashmore and Wilk 1988; Tringham 1991; Wilk and Rathje 1982). Beaudry (1999, 2004) Lamphere (2001), Rotman (2006, 2015) and Spencer-Wood (2004, 2013), amongst others, have pointed out that the uncritical use of gender dichotomies based in biological essentialism has produced distorted reconstructions of households. Spencer-Wood (1999) argued that archaeological understandings of household activities across many cultures (and times) have been shaped by assumptions based in a Western élite Victorian gender ideology as a universal system, with household tasks and roles often uncritically assigned to women. Allison (1999) also contended that such assumptions have led many scholars to concentrate on binary gender oppositions in the households of non-Western cultures (such as Blanton 1994, cited in Allison 1999).

The assumption that the duties assigned to women in the household division of labour were based on biologically fixed roles in human reproduction led many archaeologists to reiterate a tiresome uniformity in domestic labour (Tringham 1991:101). Even when it was acknowledged that both genders had household roles, these roles were commonly constructed as structurally opposed in a static normative sexual division of labour (for example, Hodder 1990; Nevitt 2001). Case studies by Gero and Scattolin (2002), Pyburn (2004) Robin (2002) and Wright (2007, 2008) showed the importance of collaborative production activities and that few tasks are ever carried out by just one sex. Although rooted in different issues and following different trajectories, household archaeologists and gender archaeologists have both come to question the assumed universality of the domestic/private/female/consumption/passive sphere that paralleled a public/male/production/active sphere (see Allison 1999; Ames 1995; Brumfiel 1991, 2006; Clark and Blake 1994; Costin 1996; Crown 2000; Hastorf and D'Altroy 1991; Hendon 1996, 2004; Robin 2002; Robin and Brumfiel 2002; Wall 1994; Wilk and

Ashmore 1988).

While a consideration of gender in household studies will undoubtedly increase the archaeological visibility of women, paradoxically it will only contribute to a further reification of the link between women and 'home' unless there is an accompanying awareness of women's activities outside the domestic environment and of men's activities within it. Structural change in economic and political organisation was presumed to occur in the male public sphere, outside the house, leaving production routines inside the house unchanged (see critiques by Brumfiel 1992; Luedke 2004). This, in turn, justified the uncritical use of ethnographies from historically and culturally related groups to interpret the artefacts and to reconstruct the domestic routines of women and men. A paradox was in effect: archaeologists did not search for variability and change in domestic labour because they assumed that domestic labour was a constant, and because archaeologists presented very few examples of variation and change in domestic labour, the assumption that domestic labour was a constant went unchallenged (see Binford and Binford 1969).

For example, both Linnenkin's (1990) and Vacca's (2010) gender-based studies of Hawaiian households of the pre-European contact period (1400-1778) point to a lack of reconciliation between the perceived female role and identity and their important role in the political and religious arena through production and exchange. This is highlighted with the concept of *kapu*, which had multiple meanings in the Hawaiian language, but is now commonly understood as protection for men from female pollution, or as male only areas or objects. Both researchers noted that current interpretations of *kapu* heavily focus on female pollution rather than understanding the political context within which the *kapu* system operated. Linnekin (1990:15) asserted historical divisions created by the *kapu* system were likely to be divisions between the elite and commoners rather than between men and women. Vassa (2010) further argued the adoption of female kapu is likely due to the low valuation of household tasks in western thought, and with that the tendency to dichotomise the public and the private.

This is similarly so in ethnographically biased accounts of Maori households in New Zealand and the Eurocentric tendency to order the division of labour according to *tapu*, under which women are viewed as a destructive force. As Parslow (1993) noted, outside archaeology there is recognition of *mana wahine,* acknowledgment of matrilineal descent, female knowledge and the complementarity of the male and females spheres. Mohanram (1999) importantly pointed out (as a caution to western feminist archaeologists), that on *Marae* (Maori communal sacred space) women have the role of greeting and men of speaking. Feminists may be critical of perceived male authority and *tapu* in the space but the specific gender roles are not an issue for Maori women – women have their own role to play on the *Marae* as well as gender roles to maintain (Mohanram 1999:110).

Households, Gender and Historical Archaeology

As noted by Rotman (2009:14), there are many themes in historical archaeology that have emerged around the study of gender, including the consumption of material goods and the influence of ideology on gender roles within and outside of the home. Hardesty (1994:136) stated that household analysis could provide important insights into the ways in which principles of gender organised modern western societies. In such contexts the activities of women are particularly 'visible' in the domestic domain. But the conventional dichotomising of gender into male/public and female/domestic 'separate' spheres in such societies results in the *a priori* categorisation of all household tasks as domestic. Many public tasks and events can, however, occur in households, such as production of goods for public sale, public waged labour (as in taking in laundry and the putting-out system), production of public labour, and public entertainment from receptions to parties, dinners to teas (Spencer-Wood 1996:399).

For example, Purser's (1991) work explored women's contributions to social labour and community networks in a 19th century Nevada mining town. Purser illustrated how gendered roles and relationships structured the ways in which public space was utilised and manipulated. Women travelled between homes, visited family and friends, and

organised community events as ways to reinforce family identities and maintain kinship and friendship bonds (Purser 1991:11). These reciprocal visits served social and practical functions in maintaining community. Unlike men's visits, which occurred over short time frames in saloons, general stores and other public venues, women's longer visits to relatives and friends 'created and maintained sets of social ties that provided some continuity to the community as a whole. Some of these networks linked and reinforced kinship ties; others mirrored, and in some instances presaged, sets of small business partnerships seen among the men of the ridge community' (Purser 1991:11). Perhaps more importantly Purser challenged assumptions that these women were simply participating in normative activities within the scope of Victorian domestic ideology by considering gender as a structuring principle at the household level. She noted:

> The intellectual shift described [in this study] only begins to move from excavating 'women' in 'households' to perceiving gender relations as an historically constituted structuring principle inherent throughout society. It raises questions about what is being excavated, and why, in specific contexts, but cannot yet answer those questions fully. These questions are not about 'doing' versus 'not doing' gender in historical archaeology, or how to 'find' women or men in the archaeological record. Rather, they examine the extent to which recognizing the gendered character of social life problematizes archaeological concepts like household, community, or human mobility. In raising such questions, the personal transition from looking for women to looking through gender also begins to articulate the critical potential of gendered research with other, parallel arguments for critical, self-reflexive approaches in historical archaeology. (Purser 1991:13).

Historical archaeologists have demonstrated that even in post-colonial societies such as those in the United States and Australia, binary male and female domains have not always existed (see Barile and Brandon 2004; Galle and Young 2004; Mrozowski et al. 1996; Scott 1994; Seifert 1991). In her landmark study, Wall (1994) traced the emergence of a division between male/public and female/private domains among

middle-class New Yorkers from 1790 to 1840. Prior to 1790, commerce and domestic life were carried out in the same locale in workshops and yards attached to homes; after 1840, homes were removed to the peripheries of commercial districts. Hendon (1996:49) pointed out that the 'most productive archaeological studies of the household have focused on gender as a symbolic system that structures social and economic relations within the household and the larger community'. Lawrence's (1998, 2000) studies of households on 19th century Australian goldfields concluded that women who tended gardens and manufactured dairy products economically underpinned small-scale mining activities. Her broader interpretation challenged the traditional depiction of goldfields as male-dominated societies and demonstrated the value of including gender in the archaeological study of households.

Rotman's (2009, 2015) studies of the cult of domesticity during the Victorian era in America demonstrated that distinctions between public and private spaces did exist, but these were rarely as complete as social prescriptions advocated. She argued that, at least until the mid-19th century, rural women produced farm products for public markets, from eggs, butter, and cheese to textiles: the idealised form of domesticity could only be fully operationalised when both women and men were present in the household, since gender roles were defined in opposition to one another (Rotman 2009).

This situation was also evidenced in Rotman's (2015) exemplary study of Deerfield Massachusetts in the 19th century, where the population was predominately female as a result of both Civil War fatalities and the significant outward migration of men due to a declining agricultural economy. As a result, the rigid separation under the ideals of domesticity for public/men and private/women activities and spaces was not possible. Women engaged in craft production as a means for generating an income for their households and households were no longer just private domestic spaces but also loci of production and distribution in the public economic realm (Rotman 2009:36). Embroidery, basket weaving or quilt making for sale was undertaken individually in

homes, as well as collectively in centralised locations, enabling some women to achieve economic self-sufficiency and autonomy. In this way Rotman substantiated Wurst's (2003:227) view that any artefact can be an aspect of production and consumption, public and private or male and female.

Contemporaneous gender ideologies are a major factor in creating 'gendered' places and the activities that occur within specific spaces in households (Kent 1990). Gender ideology informs the behavior of men and women and the domestic activities they perform in specific areas. The activities within ascribed spaces create a sense of place that is then continually reinforced through the routinisation of activities. For example, in 'middle-class' Victorian homes, parlours and dining rooms were often used as spaces to entertain guests from outside the family—the public sphere (Kruczek-Aaron 2002:178; Purser 1992:111; Rotman 2005:2). The dining room was dually used as a private location for family dinners and as a space to display internal beliefs concerning morality, family identity and social values related to middle- and upper-class status (Kruczek-Aaron 2002:179; Rotman 2005:3; Spencer-Wood 1994:179-197). Dining was a ritual practice that incorporated domestic beliefs and reiterated performances of identity that were enacted daily by families and guests to the home (Wall 1994:11). These 'constant and familiar reunions' (Wall 1991:78) with family, and sometimes male visitors from the outside sphere, reinforced the shared and performed identity of family (Wilkie 2010:74). Women often only shared the experience of dinner with people who were perceived as family, perpetuating the familial ritual experience of dining (Wall 1994:115). In her 1994 study, Spencer-Wood noted that homes were commonly segmented by activity, gender, and class status. She analysed the material manifestations of 19th century ideologies of gendered spaces, public and private dichotomies and images of the home, families, and women. Scholars such as Dixon (2014), Purser (1991), Rotman (2005, 2009, 2015), Rotman and Savoulis (2003), Spencer-Wood and Blackburn (2017), and Spencer-Wood (1994, 2013) have all investigated the arrangements of household material culture for more nuanced and informed insights into gender and spatial distributions of domestic activities.

Rituals surrounding tea taking have been interpreted as an important focus of gender informed household archaeology (Allison 2003:184; Allison and Cremin 2006:55; Hodge 2009:197; Lawrence 1998:50; Wall 1994:123). Taking tea became a feminised activity in 19th century Anglo-American cultures and developed into an opportunity to involve individuals from extended networks as family (Wall 1994:125). Taking tea exposed visitors to the symbolic meaning of sharing tea and strengthened and maintained social networks (Wall 1994:125), since women were responsible for projecting a proper family image and used their homes as a way to negotiate and display their family identity (Kruczek-Aaron 2002:180; Rotman 2005:3-4). The materials used in tea taking activities, particularly ceramics, therefore related to acts of social labour. Ceramics were actively chosen by 19th century women to reveal information on the perceived social competency, properness, wealth and status of individuals (Wall 1994:139; Praetzellis and Praetzellis 2001:646; Rotman 2005:8-10). Often 'competitive displays' (Rotman 2005:10) of wealth and success were expressed through the choice of particular vessels, whether expensive fine porcelain or less-expensive refined earthenwares (Wall 1999:113). Ceramics, proper social behaviours, and the carefully constructed public image and identity of individuals represented the family's active identity (Beaudry et al. 1991:155; Wall 1994:123).

Beaudry's (2006) study of the material culture of needlework exemplifies the benefit of centralising gender in archaeological interpretation. Rather than trying to show that certain objects are exclusive to men or women, Beaudry placed them in context in order to understand how identity was constructed. She argued that the meanings of objects may only be understood by tacking back and forth between material culture and historical texts. As an example she discussed how sewing implements could have been used by women in one context as a way of reinforcing domestic female values and identities, but in another, a male tailor used sewing implements as a way of forming and maintaining a masculine identity. By showing that the same objects can have very different meanings depending on when, where, and by whom they are used, Beaudry demonstrated that a contextual approach to gender offers a better understanding of

how these ideas of identity and material culture functioned in past cultures.

The use of a gender theory for analysis of household material culture by Beaudry et al. (1991), Little (1997, 1999), Rotman (2005, 2006, 2009, 2015), and Spencer-Wood (1996, 1999, 2004, 2013), highlight the multivalent nature of meanings attributable to objects. Such studies emphasise that ownership of particular household materials does not mean that a particular household necessarily adhered to hegemonic gender ideologies. Instead, material culture can be used by individual households in ways that suit their needs. This is in contrast to a perspective that sees material culture as merely reflective of social relations and the meanings imposed by dominant ideologies. As households are significant arenas of social production and reproduction, the practices associated with them have the potential to affect change in both the constitution of society and the meanings associated with material culture.

4.10 The gender-class relationship

> The goal of an archaeology of class based on internal relations is not to define as many classes as possible, but rather to understand the lived experience of the past. By defining different class structures through abstractions of extension, levels of generality, and vantage point, we bring into focus aspects of the totality of social relations that would otherwise be invisible. Instead of using objective definitions of class that pigeon-hole individuals into a narrow range of classes, we have to recognise that class is a relational, analytical, multiscalar category; a powerful tool that we can use to study the past. (Wurst 1999:17-18)

Although the concept of class is analytically distinct from gender, there are scenarios in which gender informs class, or, equivalently, that class relations are themselves directly organised through gender relations (see Wright 2002). Frederick Engels (1968 [1884]: 503), for example, believed that class positions only existed because specific forms of gender relations were present. Gender and class may be intertwined rather than operating simply as independent variables, and are connected not only through the

many ways they affect each other, but also through their mutual effects on a wide range of social phenomena and material culture. As Voss (2006:119) noted, 'identities are dually shaped by both daily practices and by institutional forces. And, perhaps most importantly, historical archaeological research has brought to the forefront vital connections between gender and other aspects of social identity such as race, class, ethnicity, and occupation.'

Class is a prickly theoretical concept, not popular in archaeological theory, with simple reified notions of class used when it is (Brandon 2009; Duke and Saitta 1998; Paynter 2000; Wurst 1999, 2003; Wurst and Fitts 1999). In the broadest sense it is a structural and analytical category used for classifying groups of people (Wurst 2006:190). Historically, class has been applied in three different but overlapping ways: first as an adjective for describing an individual's occupational status – solely based on the work performed as a source of income (and usually by males in western cultures); second from a Marxist perspective, based on a relationship between the means of production and ownership of land; and third from a Weberian position, which sees two key factors in the determination of class: the ownership of assets for exchange, and skills or knowledge exchanged for goods or wages, whereby skills or knowledge are a component of class (Paynter 1999; Rotman 2009). Paynter (1999:186) explained that skills or knowledge need not necessarily be formal education, but may be more along the lines of Bourdieu's cultural capital. The strength of the Weberian approach is that it emphasises class interests in a context of unequal power in which one or a few groups dominate the interests of the others (Wurst 1999:7) and is the three class system, with class, status and power as distinct ideal types. Class is therefore distinct from status, which Burke (1999:39) described as a relationship between people of disparate prestige. Status consists of the rights, duties, privileges, and powers that accrue to a recognised and named social position, and is related to social stratification (Weber 1978:302–307).

How gender sorts people into class locations is probably the most obvious aspect of the interconnection of class and gender within the realm of historical archaeology. For

example, early studies of class in historical archaeology involved socio-economic status via artefacts, with studies linking ceramics and status popular in the 1970s (Miller and Stone 1970; Otto 1977). Orser (1988) furthered the linking of power and economics, Leone (1982, 1984), then Paynter (1989) and Burke (1999) class and ideology. Meskell (2002:282) noted both class and status have been perceived as more relevant to social and historical archaeology (albeit from an androcentric perspective), most obviously because of the relationship between class and capitalism. However this may also be because, fundamentally the construction of particular forms of labour under capitalism and the binary oppositions created around public/private, work/home have created the modern stereotypes (still) lived within.

In this thesis 'class' and its relationship with gender is particularly applicable in the case study, which is a 19th century site in a colonial, capitalist Australian setting. In such locations and time periods, the common locations of work and residence make it highly likely that occupational groups (for example, miners, domestic servants, land owners) will fall within sharply distinguished sets of social networks, and they will have access to different combinations of social capital (civic organisations, religious or educational institutions). Thus, both networks and capital in combination with gender are likely to give rise to similarities in behaviours and materiality of individuals from a shared occupational/income/social group. However, it is also recognised that there are multiple axes around which collective identities can form, for example, kinship relations in many cultures cut across structural class relations. One of the ways in which class and gender are interconnected is via the way gender relations within families and kinship networks link people to various locations within the class structure.

Class or consumer choice?

In studying the archaeological material assemblages of past individuals and households over an extended time, a general pattern of material acquisition and discard can be ascertained. The choices that people make when purchasing goods can provide information about their sociocultural identities (Beaudry, Cook, and Mrozowski 1991;

Burke 1999; Douglas and Isherwood 1979; Little 2007; Mullins 1999, 2011; Wilkie 2000; Wilkie and Hayes 2006:149; Wobst 2000; Yentsch and Beaudry 2001). People may make their choices based on cultural cues, social norms and constraints, religious beliefs, personal preferences, and/or peer and societal pressures. Consumer choice refers to the selective decisions people make in acquiring food, clothing, utilitarian, decorative, or other items from the greater market economy due to factors such as geographical location, material availability, and personal demographics such as race, gender, or religion (Spencer-Wood 1987). Although arguments could be made for the existence of consumer choices about a variety of goods in early pre-market societies, the term is most often applied to groups that have some form of market economy. In a mass-market economic setting, large-scale production and manufacturing operations often decreased the number of consumer choices offered, while making those selected choices available to a broader public (Shackel 1998:16). This leads to a setting in which similar products are distributed throughout an area (locally, regionally, or nationally), leading to a reduction in regional variability of material culture and a more homogenous array of consumer choices. Uses and meanings of material objects are culturally relative and influenced by societal norms and personal preferences, so different cultures, groups, communities, and individuals will create differing material culture assemblages that relate to their sense of identity (Beaudry, Cook, and Mrozowski 1991; Burke 1999; Douglas and Isherwood 1979; Leone, LaRoche, and Babiarz 2005:583; Yentsch and Beaudry 2001).

Specific types of artifacts such as ceramics, faunal remains, and so-called 'conspicuous' objects that were likely purchased for display often tend to be the focus in studies of consumer choices and identity formation (Miller 1988; Wall 1999; Yentsch 1991). It is thought that these types of goods are selectively acquired and discarded in direct correlation with the changing income and identity of a household (Beaudry, Cook, and Mrozowski 1991; Burke 1999; Csikszentmihalyi and Rochberg-Halton 1981; Douglas and Isherwood 1979; Heath 2004; Wobst 2000; Yentsch and Beaudry 2001). People do buy or otherwise acquire certain items for a reason, whether they are or are not consciously

doing so, due to aspects of their identity, making this choice not only about affordability (Little 2007). Some of these purchases are possibly made in order to present a different self-image, one of a potentially higher social class or even one of a different ethnic background. People of the upper and middle classes likely sought certain similar goods because of social pressures and fashion, which is made up of subtle components, some psychological and some economic, both tied to the imperial context of the colonial era and later to the quite marked class differences of the industrial era (Baugher and Venables 1987). It has also been suggested that people of the lower and middle class would be doing their best to emulate the styles and fashions of those above them in an effort to better their own position in society in a sort of 'diffusion' of elite culture. To the contrary, it has also been suggested that individuals may have deliberately purchased items that were out of fashion in order to express their discontent with the mainstream culture (Shackel 1998:16).

4.11 Intersectionality, whiteness and gender archaeology

The concept of gender, as it is used in this dissertation, is that of a social construct composed of gender roles, identity, and ideology and recognises the importance of the interplay between different aspects of identity, including race, class, and gender (Battle-Baptiste 2011; Conkey and Gero 1997; Franklin 2001; Rotman 2009). The term intersectionality references the critical insight that race, class, gender, sexuality, ethnicity, nation, ability, and age operate not as unitary, mutually exclusive entities, but rather as reciprocally constructing phenomena. Queer and non-white feminists outside of archaeology have produced deep bodies of work that recognised that there were important differences among women and men rather than simply between them. Feminist scholars argued that gender, race and class are interconnected as 'intersecting oppressions' (Crenshaw 1989). These aspects of individual identity—gender, ethnicity, or socio-economic status—cannot be separated entirely from other aspects. This holds true especially in post-colonial Western contexts, where socio-economic standing was, and still is, tightly intertwined with race (Epperson 2001; Ferguson 1992; Matthews 2001; Orser 2001; Shackel and Larsen 2000; Singleton 2001).

While attention to intersectionality has increased over the last several decades, the impact on mainstream archaeological scholarship is, however, minimal (but see Conkey 2005; Meskell 2002; Sterling 2015). Instead many authors have tackled what is in essence intersectionality under the umbrella of gender, class, and identity or gender and ethnicity (for example, Agnew 1995; Beaudry 2004; McMurry 1988; Middleton 2007; Nassaney 2004; Rotman 2005, 2006; Wall 1994). This is particularly the case within historical archaeology. For example, Battle-Baptiste (2011) examined how the intersectionality of class and ethnicity shaped gendered experience at the W.E.B. DuBois site in Massachusetts. Here, the hegemony of black womanhood occurred at the multifaceted intersection of domestic ideals, post-emancipation oppression, emerging class distinctions within African-American communities, and other social, political, economic, and ideological forces of the time. However, through property ownership and resulting economic benefits women wielded uncommon power for the time (Battle-Baptiste 2011). Battle-Baptiste's Black Feminist approach to the archaeological and historical analyses of the site revealed their nuanced and hidden stories as well as elucidating how their experiences as gendered beings were significantly shaped at the intersection of race and class.

The Whiteness of Gender Archaeology

Perhaps the small number of published works on intersectionality in archaeology is a result of the small number of non-white archaeologists. Academics —in gender archaeology, feminism, and elsewhere—are predominantly white, and consequently may be biased in the same way that research may be androcentric. Indigenous people, for example, are still under-represented in academic departments, and the number of Indigenous women globally who teach archaeology can be counted on one hand. As stated by Geller (2016) on the Society for American Archaeology (SAA), Franklin (1997:799) had counted four African Americans with PhDs who specialised in anthropological archaeology, and 18 Native Americans. This number has increased since 1997 with policy initiatives aimed to increase diversity (see Norder and Rizvi 2008), but,

even if numbers had quadrupled, they would be statistically insignificant given that the SAA boasts over 7000 members (Geller 2016:153).

Feminist theories support a multi-vocal approach that does not privilege one interpretation over another, but instead, allows for a developed narrative that 'produces multivocal, contextually situated' interpretations and presentations (Hays-Gilpin 2000:95). Feminist theories and gender archaeologies aim to be multivocal and include perspectives from different countries and academic traditions (Dommasnes and Wicker 2010:12). Moreover, feminist archaeological perspectives advocate decolonization and Indigenous empowerment in archaeological scholarship (Ströbeck 2010:338-339). Despite these goals, European and American practitioners have produced most literature on gender archaeology (for example, Allason-Jones 2005; Arnold and Wicker 2001; Barber 1994; Bolger 2013; Claassen and Joyce 1997; Díaz-Andreu et al. 2005; Engelstad 2001, 2007; Gilchrist 1999; Hays-Gilpin and Whitley 1998; Hurcombe 2000; Moore and Scott 1997; Nelson 2004, 2006, 2007; Sørensen 2000; Spencer-Wood 2013; Sweely 1999). In addition, when work has been undertaken in non-Western countries and cultures, the archaeologists and scholarship tend to be from British or American universities (such as Ikawa-Smith 2002; Linduff and Sun 2004).

Global overviews of gender archaeology were undertaken by Bolger (2013), Nelson (2006), and Nelson and Rosen-Ayalon (2002) (in English), and many of the perspectives in these edited books were from 'outsiders' to those cultures studied, rather than from voices within them (such as Linduff and Rubinson (2013) on gender archaeology in East Asia; Bolger and Wright (2013) on gender in Southwest Asian archaeology). Politis (2001:94) observed this trend in South America where the work on gender had been restricted to North American practitioners, with local archaeologists doing virtually no work at all in this area at this time. Politis (2001:102) critiqued the work of Gero (1996, 2007) who observed a masculinist style of work and androcentric bias; 'this rapid inclusion in theoretical discussion, high visibility in a respected text and circulation of her results in various academic circles have been favoured by Gero's origins in the

Anglo-Saxon world'. Whether or not Politis' claims are valid, they are undoubtedly a reflection of colonised-coloniser dynamics globally: 'It is clear that through their publications archaeologists from the Anglo-Saxon world exert a disproportionate influence on research around the world' (Trigger 1984:355). This is not only a result of the greater numbers of archaeologists working in these countries, the enormous differences in resources allocated to research and the consequently greater possibilities for theoretical production' (Politis 2001:104). This is not an archaeological phenomenon, but is also a consequence of English as *lingua franca* of the academic sphere. Narvaez-Berthelemot and Russell (2001) found that English was the main language of publication across academic journals; French was the second most frequent language of publication, followed by German and then Japanese. However, the authors also argued that publication within the social sciences and humanities is more likely to occur in the native language of the researcher or the language of the culture in which the study was carried out. Thus while work on gender in archaeology can be reviewed in terms of broad outputs in English-language journals and edited books, there may indeed be work being undertaken within other locales which are not 'visible': *Kvinner i Arkeologi i Norge* (KAN) and Spanish gender archaeology are examples of this point. It should thus not be discounted that work may be undertaken within regions such as East and South Asia, and the Middle East, for example, but have not been published in the English language.

While the work of archaeologists from 'outside' a culture may be ethical, reliable and undertaken with integrity, there still may be nuanced differences in interpretation. Further, the uptake of feminist and gender theories varies across socio-cultural, religious and political fronts. In acknowledging and acting upon differences that are hierarchically structured through cultural/racial based power relations, Anglo-American archaeologists may further marginalise women from other cultures by speaking for them. This is particularly important where colonial relations are involved. Moraga, for example, argued that:

> Some white people who take up multicultural and cultural plurality issues mean well but often they push to the fringes once more the very cultures and ethnic

> groups about whom they want to disseminate knowledge. For example, the white writing about Native peoples or cultures displaces the Native writer and often appropriates the culture instead of proliferating information about it. The difference between appropriation and proliferation is that the first steals and harms; the second helps heal breaches of knowledge. (Moraga 1981:xxi)

Moraga's quote from 1981 still rings true. Gendered and cultural-specific expectations have influenced researchers to record interaction as an objective and honest reflection of societal organisation (Gilchrist 1999:36; Engelstad 1991:506; Conkey and Spector 1984:13) without recognising their prejudice. This perpetuates the myth of objectivity and damages the usefulness of practical research for future reference (Engelstad 1991:503).

4.12 Summary of Section One

This section has clearly set out and discussed in detail:

- The differences between sex and gender and the key theories of how gender is socially constructed;
- Why gender is important as part of human identity and social analysis;
- The major theoretical influences for understanding gender, including feminism;
- Connecting and locating gender theory with archaeology;
- How gender affects material culture, and the interplay with concepts of symbolism, materiality, agency, performance, heterarchy and object biographies;
- A literature review of the major works, contributions and representations of gender theory in archaeology;
- The key themes in gender archaeology, such as feminism, power, the division of labour, intersectionality, and households (with a focus on historical archaeology in light of the main case study presented in this dissertation).

Not only has Section One given a deep analysis and summarised the key work on gender, but it has also highlighted the contributions of many individuals who have laid the foundations for a sound research tradition. Further, it is an argument for the

necessity for gender theory as part of any social analysis in archaeology. But is this a moot point? There are substantive monographs published, journal articles written and conferences long past on gender in archaeology, gender archaeology, and arguments for the importance of gender in the discipline. However, despite the substantive literature on gender in archaeology generated since the 1980s, we cannot point to a detailed study that captures the state or influence of gender archaeology across the discipline. There is no directed study that has assessed the growth or decline of gender archaeology or its uptake in publication or practice, thus its relevance and permeation across the discipline has not been established.

There is, however, a need for a reference point to understand where successes and failures have been—our acceptance or rejection of gender archaeology as useful, relevant, or not. In addition, there has been a range of claims made about the volume of scholarship on gender in archaeology. Is gender 'everywhere' or 'nowhere' in archaeology? How is this measured and what is it measured in relation to? How do we prove or disprove this discourse? How do we measure the extent that the florescence of gender research in archaeology that arose during the 1980s and 1990s has changed archaeology? How are archaeologists using gender theories now? Should they be doing it more or less? What have we learned from the application of gender theory to archaeology?

The next section of this dissertation seeks to answer these questions and evaluates the impact of gender studies on archaeological discourse and practice. It seeks to locate gender across publications, to assess where and how it has been engaged, and what the uptake of gender theory has been long term. It assesses the extent to which concepts related to gender have become embedded within the research methods, themes and discussions of archaeological writing.

The primary method of interrogation for this study is feminist critical discourse analysis, using both quantitative and qualitative methods to locate gender archaeology in the

discipline and evaluate its impact. This study innovates by applying linguistic methods to correlate trends in language, gender, and archaeology. In addressing the impacts on the discipline, analysing the language of the discipline is a means to assess whether or not this work has been influential and to understand how to measure that. It is also makes it possible to gauge its reach: is it widespread (i.e. does it occur across a broad range of journals and texts) or limited (contained to specialist publications)? This research will draw attention to pervasive biases and assumptions that might be underwriting the discipline, elucidate where these biases are and therefore make it possible to flag where improvements need to be made. It aims to promote a more self-conscious discipline and to reinvigorate the debate on gender archaeology. This is also important in a broader sense, as the value that archaeology places on gender creates a legacy that affects the perception and understanding of men and women both in the past and in contemporary practice.

SECTION TWO

THE LANDSCAPE OF DISCOURSE

CHAPTER FIVE

EVALUATING THE IMPACT OF GENDER IN ARCHAEOLOGY

This section is concerned with measuring the extent that gender research has or has not changed archaeology. On the one hand, there are edited volumes and reviews published, major individual contributions made (for example, Hays Gilpin and Whitley 1998; Gilchrist 2000; Nelson 2006; and Sørensen 2000 amongst others). On the other hand, more recently, there is a palpable recent decline in the number of publications (but see Battle Baptiste 2011; Bolger 2013; Dommasnes et.al. 2010), particularly in archaeological journals. Those published have been in the domains of historical archaeology (Spencer-Wood 2010, 2017), masculinity (Skogstrand 2011), queer archaeology (Blackmore 2011) and within the special issues of the journal *Archaeologies* in 2011 (on feminist theory) and *Journal of Archaeological Method and Theory*, 2016 (on non-binary gender and sexuality). There has also been a greater traction coming from geographical regions, such as Spain (see Lozano Rubio 2011). Has gender been subsumed into post-colonial theory, discussions of personhood or transformed into sexuality studies? Or has it just disappeared, thus not important any more? This paradox raises the question as to what is really going on in the field and how this might be investigated. A hypothesis upon which the methodology is based is the concept of 'aboutness': topics which become more or less important over time, will be discussed more or less frequently.

The methods used in this thesis are adapted from Feminist Critical Discourse Analysis (FCDA) and Corpus Linguistics (CL) to quantify and provide insight into the ways that gender is conceptualised and discussed in archaeology, and the extent to which gender archaeology has influenced broader research. This section brings methods of critical discourse analysis and archaeology together, exposing a rich and nuanced

understanding of the workings of power and ideology in archaeological discourse in relation to gendered theories and practices. It aims to present conclusive data on how, where, and to what extent gender ideologies are embedded across a large corpus of archaeological writing. This is important, not merely as an 'academic' exercise in the de-construction of texts for its own sake, but as an acknowledgement that the issues around gender in archaeology have consequences for groups of women and men in both past and present communities. It has two sub-sections: the first provides a background and an explanation of FCDA and CL as a conceptual and methodological framework and outlines the methods used. The second reveals the results of the methods with the aim of showing up the subtle, and sometimes not so subtle, ways in which gendered assumptions are produced, sustained, or omitted in archaeological writing.

5.1 Prior work connecting language and gender and archaeology

The impetus for a methodology that primarily analyses language, writing, gender and archaeology comes from the works of Joyce (2002) and Conkey (2007). In terms of language analysis, Joyce (2002) explored narration and dialogue in the creation of archaeological knowledge and examined the applicability of hypertext and multimedia to a feminist approach (Joyce and Tringham 2007). Conkey (2007) reviewed the contents of four 'Readers of Archaeological Theory' in order to consider how the discipline considers feminist theory in significant works. Other studies concerning language and archaeology are those by Hutson (2002) and Tomášková (2011). Hutson examined citation practices in *American Antiquity, Journal of Field Archaeology, Ancient Mesoamerica*, and *Southeastern Archaeology* with regard to equity issues for women. He found that in *American Antiquity, the Journal of Field Archaeology*, and *Ancient Mesoamerica*, men cite women at rates that are statistically similar to the rates at which women cite women. In *Southeastern Archaeology*, men cite women significantly less than women cite women. However, despite the statistical parity of publication rates between the sexes in three of the four journals, both men and women cite women less than expected given the rate at which women publish. Hutson concluded that under-referencing of women might imply a devaluation of women's archaeological labour.

Tomášková examined the prevalence of gender in journals, but through a cursory study of gender and feminist terms in their titles, abstracts or keywords. Tomášková's (2011) review, which also included books, underscores the important and influential work in the area, but such studies can be seen as failing to address the nature of this 'transformative' aspect of gender archaeology by looking only at the production of such work, rather than the broader impacts or take-up of this work across the discipline. Most relevant to the methodology developed here is a study by Back Danielsson (2012), who showed that gender themed articles accounted for only 2% of the total number of published archaeological articles across 81 journals. Her study found that despite the fact that the total number of articles published on archaeological research had increased, the number of gender articles remained consistently low. Contemplating these studies led to the development of a new method for this thesis that connects language to gender archaeology by using linguistics methods to consider how gender theory has impacted the discipline.

5.2 Why examine journal articles?

Journal articles were chosen as the corpus for this study because they are routinely used within archaeology to legitimise authority, exchange ideas and improve career prospects. Academia emphasises a merit-based approach to rewarding success in which merit is in large part determined by the publications that archaeologists produce, making academic journals the primary medium for ranking academic 'worth' and prestige. Peer-reviewed journal articles therefore form the core and medium of this study because they are used to communicate new work, build a collective knowledge base, are validated by peers, and define the parameters of proper and accepted discourse (Joyce 2002:7-31). The evaluation of such content thus serves as a means to investigate knowledge valuation and validation in archaeology, and provide insights into existing narratives. As Colwell-Chanthaponh (2004:117-119) argues, discrepancies in publication patterns can reveal information about (in)equity in the demographics of authoritative voices in archaeology. Writing for a peer-reviewed journal is intrinsically contextualised, which means that understanding and producing written professional texts means negotiating and determining relevant aspects of professional context. These

texts can be thought of as instantiations of the practices of archaeologists and archaeological institutions. Through academic writing, institutions reflect their ideologies, i.e. their shared forms of social cognition (van Dijk 2001), shaped by the identity, actions, aims, norms and values of the institution's members. These ideologies are in turn produced and reproduced in academic discourse. In this study, FCDA and CL are used to tease out such discourse structures and strategies to highlight bias in research. The goal is to trace how the word 'gender', for example, is incorporated into the language of the texts: how it relates to the use of women and men, whether gender is worded in the grammatical classes of noun (e.g. presenting data by gender), adjective (e.g. gendered archaeology) or verb (e.g. gender the topic of investigation) and therefore whether it is perceived as thing, quality or process, and how its use changes diachronically. In this way, this study seeks to detect whether the theoretical notions used about gender are put into real practice, or remain mainly just words inserted into texts for the sake of 'ticking off' gender to be 'politically correct'. It might also be that authors are just doing 'gender' badly. That is, they either don't understand or they misunderstand gender, or think it is a category commensurate with a whole lot of others that they also misunderstand (like class, status or labour).

This study lies at the nexus of theories on language, gender and archaeology. It contributes to the understanding of:
(1) the representation of women and men, femininity/masculinity within the domain of archaeological journals;
(2) the way in which gender/ gender relations are represented in archaeological journals throughout decades, thus pointing to changing social and theoretical changes in the field; and
(3) the conceptualisation of 'gender' and its associated concepts within archaeology.

5.3 What about gender-neutral language?

Examining gender in archaeological writing using FCDA is not the same as ensuring gender-neutral language is used in journals. However, this area of gender and language is of critical importance. Language is seen as an important tool for determining gender,

i.e. if something is being perceived as feminine or masculine (Boroditsky et al. 2003; Stahlberg et al. 2007). In Western culture and languages, actions toward gender-neutral language have primarily focused on making women more salient and reducing the so-called androcentric bias (Stahlberg et al. 2007). In the 1970s the feminist movement questioned the use of a generic masculine pronoun to refer to people in general (Moulton et al. 1978). Maria Black and Rosalind Coward (1981) argued that one of the privileges accorded to men in patriarchal societies was not having to think of themselves, or see themselves represented, as gendered beings. It was also argued that the first component of androcentric thinking is the conflation of males with the norm (Bem 1993; Silveira 1980). Kahneman and Miller (1986) explained 'norm theory' in psychology as an assumption that androcentric biases were not consequences of negative beliefs about women, but rather resulted from shared cognitive structures that positioned men as more typical members of the category 'human' than women (see also Harding 1986; Slocum 1975). Hord (2016) also argued that gender neutral language became a popular and contested topic within queer and transgender communities who seek language that will aid them in expressing identities that fall outside of the binary genders of male and female. When academics submit papers for publication there is a rhetorical demand to demonstrate new findings, but within an adherence to disciplinary norms. Thus in a field like archaeology, where males have been taken as the norm, data about females may be new, unusual or additional, and the inclusion of an overt discussion on gender might be seen as risky, untested or ephemeral; data about males may also be perceived as 'given' information in the sense of 'stating the obvious' (Clark and Haviland 1977).

Studies which highlighted the norm as androcentric bias were the impetus for the change to gender-neutral language in English: mankind to humankind, man to human, and man, men and mankind to refer to people, person or persons of unspecified sex or to persons of both sexes. Examples of unnecessarily gendered language in English include non-parallel structures (e.g. 'man and wife'), lexical asymmetries (e.g. 'host' and 'hostess') and the generic use of masculine forms (e.g. 'he' or 'man'). The feminist

language movement began with a call to do away with sexist language, particularly the generic use of 'he' (which erases women from discourse) and the feminisation of things such as job titles (which creates gender distinction in professional and social fields where it should not exist). Despite the protests of prescriptive grammarians who insist that pseudo-generic he is correct and natural, the movement away from patriarchal pronoun use and the creation of neutral terms (such as flight attendant) in place of gendered ones (such as stewardess) has been 'the most widespread change in English that is considered to have been spearheaded by forces of 'political correctness'' (Ghomeshi 2010:40). The shift away from generic *he* has made some grammarians more accepting of singular they (Saul 2004) and has paved the way for activists to continue feminist commentary on sexism through the use of neutral pronouns (Wayne 2005:85). However, Hamilton (1991) pointed out that there is not only a male = people bias, but also a people = male bias. In other words, a masculine bias remains even when people are exposed to only gender-neutral language (although the bias is lessened). Hamilton asserted that this might be due to the fact that males have grown up being able to think more easily than females of 'any person' as a generic 'he', since 'he' applies to them. Recognising the power of textual commentary such as this is vital to those who argue for an engendered archaeology.

Traditionally, sexism has been defined as open antipathy toward women (Glick and Fiske 2001). However, over more recent decades, sexism (in publication) has become less overt due to strong editorial policies to avoid prejudicial remarks. Subtler forms of sexism emerged in the 1990s, characterised by Glick and Fiske (2001) as benevolent and hostile sexism. Benevolent sexism is an ideology that offers protection and affection to women who embrace conventional roles; it coexists with hostile sexism, which is an antipathy toward women who are viewed as usurping men' s power.

> Although sexist antipathy is the most obvious form of prejudice against women, evidence suggests that sexist benevolence may also play a significant role in justifying gender inequality. Together, these ideologies represent a system of rewards and punishments that provide incentive for women to

> remain in conventional gender roles. Benevolent sexism… Both hostile and benevolent sexism appear to be cross-culturally prevalent, supporting the argument that these ideologies arise from structural aspects of male-female relations that are common across human groups (Glick and Fiske 2001:116-117).

Swim and Cohen (1997) see this as 'Modern Sexism', sexism that is either hidden and clandestine, or unnoticed because it is built into cultural and societal norms. As discussed by Lazar (2014), 'modern sexism' and gender bias is pervasive and insidious in (late) modern societies, and is the operation of subtle and seemingly innocuous forms of power that are substantively discursive in nature. Here, it is useful to complement the concepts of modern and benevolent sexism with the view of power relations as dominance, particularly in Gramsci's terms of hegemony (see Chouliaraki and Fairclough 1999). Modern power and hegemony are effective because they are mostly cognitive, based on an internalisation of gendered norms and acted out routinely in the texts and talk of everyday life. This makes them an invisible power, misrecognised as such, and recognised instead as quite legitimate and natural (Bourdieu 1985), and in other words, they are ideological. In light of the above, the following hypotheses were developed:

1. Although the use of the generic 'man' would no longer be visible in the archaeological literature from the 1990s, an androcentric tendency to explain gender difference findings as being about women rather than men would still be evident from the 1960s until the present.
2. Across the corpus, the word 'human' will replace 'man' from the 1990s, but there will be no significant change to discussions of masculinity/men.
3. Across the corpus the words 'women' and 'woman' will be replaced by the word 'gender'.
4. Across the corpus there will be a change to gender-neutral terms, but no significant change in the content or analysis of gender.
5. Across the corpus women and children will remain associated words.

5.4 What is discourse analysis?

Discourse is a form of language use, and discourse analysis is the analytical framework that was created for studying actual text and talk in the communicative context. This dissertation relies on Foucault's (1980) and Link's (1983) views of discourses as historically contingent cultural systems of knowledge, belief, and power. According to Foucault's definition, a discourse 'creates a field of knowledge by defining what is possible to say and think, declaring the bases for deciding what is true and authorising certain people to speak while making others silent or less authoritative' (Foucault 1972:49). Link (1983:60) saw discourse as 'an institutionalised way of talking that regulates and reinforces action and thereby exerts power'. In this sense, discourses are more than social expressions because they are institutionalised and regulated ways of talking, writing and acting. Like ideologies, some discourses may become dominant and authoritative in a given context, so that one discourse is privileged over others, and 'others' are then marginalised or displaced. Different discourses are also entangled with each other to form an overall societal discourse, which evolves over time (Jäger and Maier 2009).

> Discourses do not merely reflect reality. Rather, discourses not only shape but even enable (social) reality. Without discourses, there would be no (social) reality. Discourses can thus be understood as material reality *sui generis*. They are not a second-class material reality, not 'less material' than 'real' reality, not passive media into which reality can be imprinted.(Jäger and Maier 2009:36)

In this interpretation, discourses are material realities, not just ideas; they are the concrete realisation of abstract forms of knowledge and so can be viewed as a societal means of production. This is because human action creates materialisations (Foucault 1972:54). Discourses guide the individual and collective creation of reality (the power of discourse), but individuals or groups have the chance to influence them. Foucault put forth the idea of dispositives, whereby materialisations, discursive and non-discursive actions shape reality (see Jäger and Maier 2009). This results in the constantly evolving synthesis of knowledge that is built into language, materialisations, and action.

Discourse also does ideological work. In other words, ideologies are often produced through discourse. To understand how ideologies are produced, it is not enough to analyse words or texts; the discursive practice (how texts are interpreted and received and what social effects they have) must also be considered (Fairclough and Wodak 1997).

An important distinction is between what a discourse is and what a discourse does**.** Discourse analysis within a Foucauldian framework tends to consider how language invokes the knowledge systems of particular institutions, such as academic discourses, and looks at language phenomena as evidence of society and social life (what discourse 'does'). Discourse analysis involves looking beyond the literal meaning of language, understanding the context in which it was produced, when and why. Discourse analysts see research findings as socially constructed, for example, products of historical, geographical, economic and other contexts, and influenced by the researchers themselves (e.g. disciplinary background, age, gender, ethnicity and so on). Discourse analysis is not only about the retrospective analysis of meaning in language, but also about the production of an ongoing reality, conveyed through active subjects.

5.5 Explaining the conceptual framework: Critical Discourse Analysis (CDA) and Feminist Critical Discourse Analysis (FCDA)

5.5.1 Critical Discourse Analysis (CDA)

CDA regards language as a 'form of social practice' and considers the context of language use to be crucial to discourse (Fairclough and Wodak 1997:258). Its platform is that language shapes our thinking while at the same time our thinking shapes language (Chouliaraki and Fairclough 1999). The goal of CDA is, fundamentally, to analyse how power, abuse, dominance, and inequality are enacted and reproduced in text (van Dijk 2001). Hence, the main difference between a discourse analysis and CDA is the nature of research aims: CDA is primarily an advocatory role for socially discriminated groups (Wodak and Meyer 2009:19). Fairclough (1995) stated:

> By CDA I mean discourse analysis which aims to systematically explore often opaque relationships of causality and determination between (a) discursive practices, events and texts, and (b) wider social and cultural structures, relations, and processes; to investigate how such practices, events and texts arise out of and are ideologically shaped by relations of power and struggles over power; and to explore how the opacity of these relationships between discourse and society is itself a factor securing power and hegemony. (Fairclough 1995:132-133)

CDA not only focuses on language and language use, but also on the linguistic characteristics of social and cultural processes framed in terms of social class, hierarchy and power (Harrington et al 2008:10). Through a systematic investigation of language, CDA aims to make connections between sociocultural processes and structures on the one hand, and properties of texts on the other (Fairclough and Wodak 1997; Wodak 1996, 2001; Meyer 2001). In general, CDA as a school or paradigm is characterised by problem-oriented research questions that are inter-disciplinary and eclectic. Bloor and Bloor (2007:12) stated that CDA could be used to address issues of major international importance (macro issues) or relatively small scale ones involving individuals (micro issues), since both are equally valid subjects of analysis.

Van Dijk (2009) and Wodak (2008) both stated that, despite different disciplinary backgrounds and a great diversity of methods and objects of investigation, all CDA studies are connected by theory and have epistemological roots in critical theory, Marxist theory, and critical linguistics. They also share:

- an interest in the properties of 'naturally occurring' language use by real language users (instead of a study of abstract language systems and invented examples);
- a focus on larger units rather than isolated words and sentences;
- the extension of linguistics beyond sentence grammar towards a study of action and interaction;
- the study of the functions of the (social, cultural, situative and cognitive) contexts of language use;

- an analysis of a vast number of phenomena of text grammar and language use: coherence, anaphora, topics, macrostructures, speech acts, interactions, turn-taking, signs, politeness, argumentation, rhetoric, mental models, and many other aspects of text and discourse; and
- the aim of providing a thorough description, explanation and critique of the textual strategies writers use to naturalise discourses.

Of particular interest to critical discourse analysts are those aspects of social practices that are discursive in character or that are discursively represented in particular ideological ways (Chouliariaki and Fairclough 1999). In other words, language plays a crucial role in expressing, changing and, particularly, reproducing ideologies. Therefore, if we want to know what ideologies are, how they work and how they are created, changed and reproduced, we need to investigate their discursive manifestations. CDA is a method for the detection of biased and manipulative language, that 'endeavours to reveal power relations that are frequently obfuscated and hidden, and then to derive results which are practically driven' (Wodak and Meyer 2009:20). Every act of meaning made through language and other forms of semiosis contributes to the reproduction and maintenance of the social order, as well as to resisting and transforming that order. Discourse shapes, and also is shaped by, some form of material reality (Sunderland and Litosseliti 2002:10). This hidden dimension of gendered power is also captured succinctly in the '(In)visibility Vortex' (Figure 5) (Lewis and Simpson, 2011). This model highlights struggles and tensions around the norm, through processes of preservation and concealment within the norm as well as dynamics of revealing, exposure and disappearance as features of the margins. This process is pertinent to the maintenance of the 'male as norm' in archaeological discourse, and this thesis aims to disrupt this cycle at both the 'revelation' and 'exposure' stage.

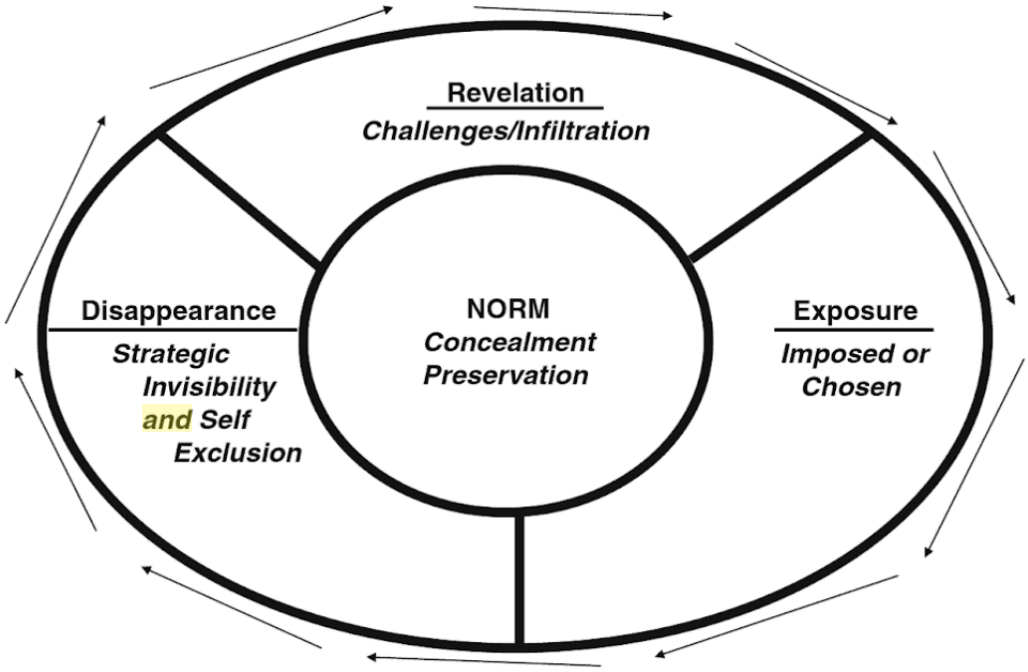

Figure 5: The (in)visibility vortex (from Lewis and Simpson 2011)

Mautner (1995) was the first to specifically propose combining CDA and corpus linguistics. Mautner's (2005) approach relied on the use of concordance, but the technicalities of computer processing remain in the background and are not themselves the object of investigation. This approach allows researchers to work with larger data volumes, complementing and triangulating with CDA, thus making results more reliable (Mautner 2005:1-2). This thesis has adapted methods developed by Mautner (2005), as these were most applicable for answering the research questions. In particular, this dissertation relies on Lazar's (2005, 2007) feminist CDA approach, with FCDA as a backdrop, in tandem with Mautner's CL to develop the methods and analysis.

5.5.2 Feminist Critical Discourse Analysis (FCDA)

Feminist Critical Discourse Analysis (FCDA) was proposed by Michelle Lazar (2005, 2007) to foreground 'gender' as a variable or social factor in CDA research. While there had been work from a feminist perspective within CDA prior to the development of FCDA in 1998 (see Caldas-Coulthard 1995; Talbot 1995; Wodak 1997), FCDA as a critical perspective has developed at the intersection of critical discourse analysis (CDA) and

feminist studies, both of which are guided by goals of social emancipation and transformation (Lazar 2014). FCDA looks carefully at the complex workings of power and ideology in discourse, but focuses particularly on the way these contribute to sustaining a hierarchically gendered social order (Lazar 2007:141). However, FCDA is not simply the application of the existing CDA framework to the study of gender. Whereas the study of gender using CDA suggests that the theories and methods of a CDA approach remain unchanged, except that the object of study happens to be 'gender', FCDA positions feminist theory as an intrinsic part of the methodology itself. Cameron (1998) characterised the founders of CDA as 'straight white men' who privileged class over other determinants of power, such as gender and ethnicity. Lazar (2005,2007, 2015) explained that a feminist CDA is differentiated by the inclusion of:

1. feminist analytical resistance or activism;
2. the assumption that 'gender' is an ideological structure;
3. a recognition of the complexity of gender and power relations;
4. attention to the role of discourse in the (de)construction of gender; and
5. critical reflexivity as praxis.

The analysis of data in FCDA includes meanings that are expressed overtly, but attention is also given to the 'less obvious, nuanced and implicit meanings for the subtle and complex renderings of ideological assumptions and power relations in contemporary societies' (Lazar 2005:13). FCDA includes an explicit focus on gendered—and by extension, sexed—assumptions within discourse, and aims to target and deconstruct patriarchal or masculinist discourses. Equally, FCDA is concerned not to polarise males as villains and females as victims in any oppositional sense, nor even to presume that women as a category are necessarily powerless, disadvantaged or oppressed by 'the other'. In FCDA, the focus is more specifically on critiquing discourses that sustain a patriarchal social order and gender bias. In this way, FCDA is as much about theoretical assumptions that guide the analysis and the methods used to analyse discourse as it is about the basic selection of research themes. FCDA also examines the performative

(rather than essentialist or possessive) nature of gender as something people enact or do, not something they are, as influenced by Butler (1990).

Although some studies on gender and language have applied gender performativity to research on individuals in speech, it is worth considering how gender identities can be performed representationally in texts, and particularly by institutional bodies (Lazar 2007). FCDA interrogates the ways that analysis of institutionally produced discourse might be used to create change within those very same institutions. Of particular importance is the fact that feminist researchers should be critically reflexive not just of their theorising of discourse and social structures, but also of their own academic practices. FCDA is therefore interested in what Lazar calls 'the reflexivity of institutions' (Lazar 2007:152). Examples of how Lazar's FCDA have been applied include Parson's (2016) study of STEM syllabi. Here, Parson used FCDA to understand how language and discourses used in syllabi replicate the masculine nature of STEM education. Other researchers have analysed a diverse range of corpora, including herbalist pamphlets in post-apartheid Johannesburg (Edwards and Milani 2014), migration narratives of dual career Zimbabwean migrants (Makoni 2013), Hindi film songs (Rizwan 2011), and the representation of feminism in Estonian print media (Marling 2010). In considering the use (and usefulness) of FCDA, it is possible to summarise the methodological steps as:

1. historical, textual and socio-political analysis (which lead to the formulation of research questions and hypotheses);
2. macro-analysis (quantitative study);
3. micro-discourse analysis (qualitative study); and
4. interpretation (Wodak 2008:207-208).

The methods and analysis used in this research are anchored in FCDA and CDA, however, FCDA is amenable to being combined with the methods of CL to provide the 'macro-analysis'. This methodology cuts across standard research boundaries to give a diachronic perspective of the writing on gender in archaeological texts over a significant

period of time. The application of CL with FCDA allows for identifying overall patterns for interpretation; dealing with frequencies in a large corpus has the potential to make claims where other approaches cannot (Sunderland and Litosseliti 2008:6). And, as Mautner (2005:3) noted of CDA, 'There may be a temptation to proclaim features as typical rather than build up the notion of “typicality” on the basis of frequency. The hidden danger is that the reason why the texts concerned were singled out for analysis in the first place was precisely that they were not typical’. It thus seems reasonable to argue for a ‘mixed-methods’ approach (Dörnyei 2007) in analysing archaeological discourse, combining quantitative and qualitative research.

5.5.3 Explaining the methodological framework: Corpus Linguistics

Corpus linguistics is a relatively new field in linguistics and involves the analysis of large collections of electronically stored texts aided by computer software (Baker 2010). McEnery and Wilson (1996) characterised it as a method that relies on real-world instances of language use in order to determine and explore trends or derive rules in the way language is actually used and produced. Biber et al. (1998) described corpus linguistics as having four main features:

1) It is an empirical (experiment-based) approach that analyses patterns of language use in real language texts (spoken or written);

2) It uses a representative sample of the target language stored as an electronic database (a corpus) as the basis for the analysis;

3) It relies on computer software to count linguistics patterns as part of the analysis; and

4) It depends on both quantitative and qualitative analytical techniques to interpret findings.

CL software presents the researcher with language in a form that is not normally encountered, and this can highlight patterning that often goes unnoticed. It can also function as a heuristic tool, raising questions to be followed up, and draw analysts’ attention to phenomena. In this sense, CL is a means to an end rather than an end in itself. CL applications include discourse analysis, lexicography, stylistics, forensic

linguistics, language variation studies and language teaching (Baker 2006:2-3). It is both a qualitative and a quantitative method. Depending on the use made of corpora and corpus software, researchers can interrogate, for instance:

a) the frequency with which every word in a corpus occurs;

b) words that are unusually (in)frequent when compared with a reference corpus;

c) all occurrences of a particular word;

d) recurring larger structures (n-grams, clusters, phrases);

e) grammatical frames;

f) DA and CDA through the use of wordlists, concordances, collocates and key word searches;

g) occurrences of parts of speech and their combinations.

The epistemological advantage of this methodology is that the data are highly representative and involve the use of empirical, systematic evidence, even though the interpretation can still be subjective. Corpus searches and studies are often reliable and replicable; especially when they concentrate on formally defined items. Another advantage is that such studies can uncover features of language that are inaccessible to intuition or that cannot be discovered through the analysis of one or a few texts. This concerns patterning, typicality of usage and quantification (such as frequency lists and particular kinds of semantic-pragmatic meanings. The focus on large amounts of actually occurring discourse allows the study of typicality and quantitative norms, as well as across-text or intertextual patterning. The software is able to extract linguistically encoded social information and, in particular, to study linguistic phenomena that crystallise around keywords and can enable tests of statistical significance. Thus, hypotheses can be verified, falsified, or modified, and new language features can be uncovered. Burrows (1987:2–3) explained CL as providing 'evidence to which the unassisted human mind could never gain consistent, conscious access. Computer-based concordances, supported by statistical analysis, now make it possible to enter hitherto inaccessible regions of the language [which] defy the most accurate memory and the finest powers of discrimination.

Frequency and recurrent patterns, which form the basis of analysis and interpretation, are objectively produced by concordance software, and the results can be checked and challenged by other analysts. Interpretation drawn from frequency information and recurrent patterns is less prone to subjectivity and circularity, even though these aspects are an intrinsic part of any interpretative process and therefore cannot be completely ruled out (Clark 1992; Hunston 1999, 2002; Stubbs 2001). Teubert advocated diachronic corpus linguistics (2004:121; 2005:4; 2007:80-83), and sees a corpus as a hermeneutic tool to trace how meaning is interpreted, paraphrased and adapted (or rejected) across texts over a period of time. Teubert focuses on the following aspects: 1) collocations, 2) usage and 3) semantic change. Collocations are where 'units of meaning' can be found, and by usage, he emphasises the need to consider 'contexts in which a word is found'. Semantic changes occur in the course of words being referred to and paraphrased in different texts over time. These changes can be observed from comparing collocations in a diachronic corpus (e.g. the collocational analysis of the change in the meaning of the word 'gender' in *American Antiquity* since 1945). In verifying the usage of the word and tracing the emergence and spread of the meaning across texts, this method subscribes to a fundamental principle of corpus linguistics that all data must be authentic real language and considered in context. What is germane to the current study is Teubert's view of discourse as containing people's attitudes or beliefs, which are textually transmitted and can be traced by investigating the corpus.

The CL approach is a bottom-up, inductive one: beginning with frequency lists and keyword searches, the analyst identifies regularities in a corpus of texts of the same provenance, with a particular focus on those features that offer evidence of the relationships of the text-type in question. Studying these data, the researcher constructs a provisional schematic for the overall structure of the text type, which can then be checked against individual instances and refined if necessary. Using the resulting description and taking into account the contextual and cultural factors in which the texts are produced and interpreted, the researcher is then in a position to speculate as to how the formal features of the texts encode their communicative and social functions.

Baker (2006) argues that corpus techniques can be used to show the 'incremental effect of the discourse' (2006:13). Associating words occurring repetitively and naturally (or in this instance an expected absence of words) is strong evidence for an underlying hegemonic discourse, and a measure of structural inequality.

Table 1: Summary of the principle differences between CL and CDA

CL	CDA
Quantitative	Qualitative
Data driven	Theory driven
Representative samples	Individual contextualized examples
Statistical relevance = representative	Social relevance = meaningful
Breadth	Depth
Generalizability	Precision and richness
Replicability = greater objectivity	Political intent = subjective interpretation
Descriptive power	Explanatory power

The research in this dissertation has been designed primarily in accordance with the agenda of FCDA, but with CL as a tool to unravel how particular gender discourses, rooted in particular socio-cultural contexts, construct gender reality, gendered social identities and social relationships (Fairclough 1992:64).

5.6 The corpus

The basic resource for corpus linguistics is a collection of texts, called a corpus. Most modern corpora are electronically stored collections of naturally occurring language, and consist either of complete texts or large extracts from long texts. Corpora can be of varying sizes, but Kennedy (1998) suggests that a corpus should be at least 100,000 words in order to make generalisations. They are compiled for different purposes and are composed of texts of different types (see Hunston 2002; Meyer 2002), but are homogeneous to the extent that they are composed of texts from one language or one variety of a language. A corpus is not a sample of an individual's performance, but of the language use of many speakers (Mollin 2009). In principle, a corpus is actually designed for accurate study of the linguistic properties, features, and phenomena observed in a language.

Table 2: The difference between a text and a corpus

A text	A corpus
Read whole	Read fragmented
Read horizontally	Read vertically
Read for content	Read for formal patterning
Read as a unique event	Read for repeated events
Read as an individual act of will	Read as a sample of social practice
Coherent communicative event	Not a coherent communicative event

According to McEnery, Xiao and Tono (2006), a corpus is selected and ordered according to explicit criteria defined by the user in order to be used as a sample. It is usually designed to contain millions of words compiled from diverse text types across demographic variations, so as to encompass the diversity a natural language exhibits through its multifaceted use. If the corpus is small, it can only provide a small window on the language phenomenon under investigation and hence, the results will only provide a partial picture of its 'true' complexity. On the other hand, a large corpus will provide a more complete view of the phenomenon and thus will always be superior to a smaller one. The argument put by Sinclair (2004:189) is that

> There is no virtue in being small. Small is not beautiful; it is simply a limitation. If within the dimensions of a small corpus, using corpus techniques, you can get the results that you wish to get, then your methodology is above reproach - but the results will be extremely limited.

Here, a specialised corpus of archaeological texts has been created with specific data harvesting in mind. This is known as a 'specialised corpus' (see Hunston 2002:14). This has been restricted to the genre of archaeological peer reviewed journal articles. In this study, the corpus is 33,268,048 words, large enough and diverse enough to provide a substantive analysis of trends within the discipline and from which to be able to draw generalisations.

The number of articles analysed in this study is 4784, drawn from the journals *Australian Archaeology*, *American Antiquity, Archaeologies*, *Historical Archaeology*, *Journal of Social Archaeology* and the *Journal of Archaeological Method and Theory*. Three of these journals were selected to represent older, established journals (*Historical Archaeology, American Antiquity* and *Australian Archaeology*) so that the discourse on gender could be tracked over the long term and could be compared with newer journals established after the introduction of gender as a concept (*Archaeologies, Journal of Social Archaeology* and *Journal of Archaeological Method and Theory*).

The time period examined ranged from the establishment (first issues) of each journal, to 2013, with the exception of *American Antiquity* (the years 1935 to 1946 are excluded as they predate theories of social gender). The aim is to gain an insight into the *construal* of gender through time, and across journals. These journals are also those that have the highest number of gender themed papers according to Back Danielsson (2012) and Tomášková (2011). The impact of journals was also a factor (assessed through Google Scholar Metrics and archaeology journals listed in the ISI Web of Knowledge for 2012). Five of the journals are US based, but the study also includes one from Australia as a comparison. *Historical Archaeology* was specifically included in order to assess whether the time-depth and particular methods available within sub-disciplinary areas affected the consideration of gender. Historical archaeology, as the study of the more recent past that is able to draw on primary archival and other sources for contextual detail could be considered more likely to consider gender than studies of deep time. Importantly, the corpus designed here included the content of journal articles but excluded materials such as indexes, book reviews, and obituaries. Reference lists and bibliographies where indicator words re-occurred were omitted.

Table 3: List of journals and number of articles used in the study

Journals	Years	Total articles
Archaeologies (ARCH)	2005-2013	221
American Antiquity (AA)	1947-2013	1505
Australian Archaeology (AAA)	1974-2013	1421
Historical Archaeology (HA)	1967-2013	1143
Journal of Archaeological Method & Theory (JAMT)	1994-2013	273
Journal of Social Archaeology (JSA)	2001-2013	221

5.7 The software

Anthony (2013) noted that corpora are often referred to as the 'tools' of corpus linguistics. However, it is important to recognise that corpora are simply linguistic data and that specialised software tools are required to view and analyse them. Hunston (2002:3) noted, 'a corpus does not offer new information about language, but the software offers us a new perspective on the familiar'. Corpora are interrogated through the use of dedicated software, the nature of which inevitably reflects assumptions about methodology. At the most basic level, corpus software:

- searches the corpus for a given target item,
- counts the number of instances of the target item in the corpus and calculates relative frequencies,
- displays instances of the target item so that the user can carry out further investigation.

Two types of software for corpus analysis can be distinguished: software that is tailored to one specific corpus and software that can be used with almost any kind of corpus. Examples of the former are two software programs that have been tailored to the British National Corpus, namely *SARA* and *BNCWeb*. Examples of the second are

MonoConc Pro, WordSmith and *AntConc*, which are the most widely used corpus software. While there are many differences between the software packages, certain basic functions can be performed by practically all available software. For most kinds of linguistic analyses, the most important function is the ability to search the corpus in question for the occurrence of certain strings (i.e. words or phrases). As output, the software then usually gives information on the number of these strings in the corpus and so-called concordance-lines, which show the string in question in context.

Two further basic functions that can be performed by almost all corpus software are sorting (for example according to the word to the right or left of the search term) and 'thinning' (i.e. the removal of irrelevant instances such as numbers or symbols). The advantage of the analysis of texts using corpus software is that the researcher obtains information from a text in a relatively short period of time that would otherwise take hours or even days if it had to be retrieved manually. The concordance-line output allows the researcher to see the occurrences in context, so that the use of the linguistic item in question, in particular frequent patterns, can be investigated. Retrieving more context than shown in the concordance lines, searching only a part of a given corpus and saving the results are also regular features of almost all corpus software. Most programs can also find words frequently occurring in the vicinity of the search.

The software that was selected for use in this study was the freeware program Antconcordance (AntConc), 2012, developed by Anthony Lawrence (http://www.laurenceanthony.net/software/antconc/). This allows concordances to appear with selected keywords, and enables additional detail and context to be analysed. In addition, AntConc is the only tool that explicitly details the definition of 'words' that it uses and has an easy-to-use interface especially designed for non-linguists. AntConc can perform basic operations, such as producing KWIC concordance lines and keyword lists, and is able to be used on both Windows and Macintosh OS X.

The steps involved in the methodology are:

1. Define the aim, type, size and limit of the corpus (considering representativeness, comparability and availability).
2. Systematically collect the corpus data (downloading pdfs of each article).
3. Covert the corpus data (pdf to rtf) for processing, and clean the data.
4. Construct Excel spreadsheets.
5. Run each journal issue through AntConc software for each of the key words, and save raw frequency counts for each in Excel.
6. Calculate normed counts (pmw) and add to spreadsheet.
7. Download concordance lines and examine manually, save in Word.
8. Check MI scores and copy to linked Excel spreadsheet.
9. Extract collocations from AntConc. Check in textual environment for context (nouns, verbs, binomial pairs).
10. Generate graphs of data for analysis.

5.8 The keywords

Keyword analysis is the means by which frequency counts of the lexical items in the specialised corpus can be automatically compared to their frequency counts in a general, reference corpus. Baker (2006:125) argued that a keyword list of each text is generally considered more helpful than a wordlist in suggesting lexical items that could warrant further examination. They can be regarded as ‘signposts‘, providing the analyst with a ‘way in‘ to the corpus. A keyword analysis is often performed as a first step in the analysis of specialised corpora, in order to provide the investigation with lexical items for further analysis (Flowerdew 1998; Tribble 2000). Keyword frequencies provide a useful mechanism for understanding academic research trends. The keywords identified can indicate the saliency of certain text features, such as the 'aboutness' of a text, stylistic characteristics or descriptors of text genres. While keywords provide quantitative evidence of observations and therefore reduce researcher bias, such observations only provide indicators of patterns, which must be interpreted with the help of concordance and collocation patterns and context (Baker 2006). Keyword analysis has become one of the most popular starting points in corpus-based analyses

(O'Keefe and McCathy 2010). Usually keywords are word forms (and usually nouns) that occur in a text more frequently than expected by chance alone and are often closely connected to the overarching themes and genre of a text or set of texts. 'Keyness' is defined as 'a quality words may have in a given text or set of texts, suggesting that they are important, [that] they reflect what the text is really about' (Scott and Tribble 2006:73). Keyword analysis allows an exploration 'not just [of] how sentences are structured but how whole sections of text flow and move' (Scott and Tribble 2006:7). Importantly, keywords are a step in a flexible process, and like the journals, can be altered to provide an analysis of different content.

There is a caveat needed here. There is no intrinsic link between frequency and ideology. It is the interpretative process which attaches ideological significance to recurrent patterns observed in the corpus data, and all interpretation is inevitably shaped by the analyst's own ideological position. Danielsson (2003:114) argues that 'the actual observed frequency' is the best guide towards 'tendencies in language'. Collocations identified by *AntConc* are by default, raw frequency-based. The benefit of working with raw frequency is that the results are not statistically manipulated in any way, and may even be more useful for revealing more subtle degrees of semantic differences.

This study has chosen specific keywords as a starting point to investigate gender-related discussions in the corpus. One of the main issues that had to be overcome for this analysis was the notion of what counts as gender. What 'key' words warrant inclusion so that the analysis can claim that gender is relevant in a stretch of written text? Keywords for the concordance study were thus selected following Swann (2002:50-58) and sex dichotomy in gender research, as well as the plain English understanding of the terms. The goal here is to uncover implicit or unconscious bias related to their use. Terms such as 'non-binary' were not used as keywords as they would be captured as collocations with 'gender'.

The keywords used are:

- Gender
- Sex
- Masculine
- Feminine
- Male
- Female
- Men
- Women
- Man
- Woman
- Human
- People
- Family
- Children

Gender

Grammatical gender is a noun class system by which nouns are divided into two or more categories, two of which usually correspond with 'male' and 'female' human genders, respectively. Semantic or embodied gender, however, is almost always aligned with masculine and feminine grammatical categories.

Masculine and Feminine

Stets and Burke (2000:1) define femininity and masculinity are defined as one's gendered identity, which refers to the degree to which individuals see themselves as being masculine or feminine, given what it means to be a man or woman in a specific community. Because behaviours are culturally defined and constructed, masculinity and femininity are fluid and malleable concepts.

Human and People

The words human and people were included to evaluate the change to gender-neutral terms and to allow an analysis of the depth of discussion on social theories. Human and people were also considered to be fairly constant terms, regardless of whether gender formed a focus or not.

Family and Children

Family and children were included to ascertain the degree of heteronormativity embedded in research. These words could also be linked to the use of other words, for example to find out if children and women were correlated, or how often the terms men and children occurred. The goal here is to uncover implicit or unconscious bias related to their use. Family is also the main location of biologically and legally defined relationships between men and women, adults and children, but also where private and public spheres intersect.

Sex

Sex was included to ascertain if sex and gender are sometimes used interchangeably. Sex and gender and do complement each other, they nonetheless refer to different aspects of what it means to be a woman or man in any society. It was also included to measure if there was any content on sex (acts) and sexuality in the corpus.

Man and Woman; Men and Women; Male and Female

Gender identity is typically perceived as binary – individuals are expected to exclusively identify either as male or female, men or women. An analysis of the use of these words individually and in pairs, this can also highlight differences in the amount of content of either subject. Man is also considered in terms of its use as referring to human.

5.9 What is a concordance?

A concordance is a list of words or a phrase with a few words of context on either side so that the use of the word can be ascertained, and is therefore both a quantitative and qualitative method of analysis. With the help of specially designed software, words or phrases of a corpus can be viewed in context in the form of so called concordance lists. The corpus software allows concordances to appear with the selected keywords, thus more detail can be analysed. AntConc carries out a number of statistical operations on items found in the corpus, ranging from simply counting the number of occurrences of keywords to measuring the statistical degree of significance of occurrence. In addition, the software presents concordance lines that simply identify the keyword each time it occurs and presents each instance, or as many as are required, to the corpus user. Usually this is presented with the target item in the centre of the screen and a few

words to the left and right of that item. This 'key word in context' presentation (known as KWIC) has a number of uses. Even the small amount of context is usually enough to show what the word or phrase means, what phrases it occurs in, and/or the discourse function that it has. Quantitative information about word meaning and function that is not available automatically can therefore be calculated. For example, a study by Baker (2006) found that the word 'girl' was preceded by adjectives describing appearance, occupation, morality or sexuality ('semantic preference'), whereas 'boy' was preceded by words denoting employment. Thus, in addition to the frequencies of words, the context of the use of such words is also analysed to determine whether gendered words permeate text.

5.10 What is collocation?

Corpus software can identify collocations in two different ways. First, the search for collocations can be open such that the software returns the most frequent word combinations within a predetermined word span. Second, when one word in particular is examined for other words it co-occurs with, the former is referred to as node and the latter as collocate (Sinclair 2004). The search for collocations then begins with the specification of a node and the corpus software finds all collocates within a predetermined word span, usually three to five words on each side of the node word (Bartsch 2004). Collocation is concerned with how words go together, i.e. which words occur in constructions with which other words. Some words occur together often, other words may occur together occasionally, and some are not likely ever to occur. Knowing which words go together is an important part of understanding the meaning of a text. Some words do not occur together because the combination would be nonsense; that is, it would not make sense because it is outside of reality. In English, for example, we do not refer to a tree's legs, but we do refer to a table's or a person's legs. A collocation analysis reveals discourse patterns and meanings that are neither evident from frequency lists of individual words nor from the readings of larger volumes of text in a manual analysis. 'Collocation is […] a way of understanding meanings and associations between words which are otherwise difficult to ascertain from a small-scale analysis of a single text' (Baker 2006:96). If discourse is incremental, collocation offers us a way of

accessing that accumulation of meaning. It allows for identification of non-obvious meaning and patterns.

Collocations are not simply lexical items, they 'are also widely shared within a speech community' (Stubbs 2001:35) and are often 'nodes around which ideological battles are fought' (Stubbs 2001:188). In *AntConc,* collocation assists in managing the data pool to isolate the statistically significant co-occurrence of words and to locate the tendency of words to be biased in the way they co-occur. The simplest collocate list is in order of raw frequency, but this tends to include words that are not particularly significant for a given node word even though they are very frequent in the language as a whole. In English, for example, 'the' and 'a' tend to occur near the top of many collocate lists simply because they are more common overall. Statistical packages (such as t-score, z-score, or mutual information) are often used to correct for this. Mutual Information Score has been used in this research, explained more in Chapter Six. These calculations compare the actual number of occurrences of a given word as a collocate with the number of occurrences that would be expected if the words in the corpus were distributed randomly.

Collocations and gender connotations

To give insight into the linguistic representation of gender in archaeology, this study explores the keywords, analysing their collocation profile and concordance lines, and the method applied here aims to uncover how gender ideologies are embedded across a large corpus of writing, as opposed to considering discrete titles and themes. The study aims to answer the following questions: what patterns can be observed in the use of these words? What are the most statistically prominent collocates? In which contexts do they appear most commonly? Stubbs (2001) claimed that:

> Corpus linguistics is not concerned with what happens to occur (at least once): indeed its methods are generally designed to exclude unique instances, which can have no statistical significance. It is concerned with a much deeper notion: what frequently and typically occurs. (Stubbs 2001:151)

Gender discourse has a number of words associated with it, therefore a greater number of these words occurring in a body of work would indicate 'gender' discussion. The inclusion of 'gender' connotes a way of thinking, not a bounded subject matter, and cuts across a number of inter-disciplinary areas. Thus, to gauge the inclusion of gender 'thinking' in a paper it is not only the quantitative level of gender word content that needs to be considered, but also the context of gender associated words. For example, the term gender may be used frequently but inaccurately as a cue for biological sex or women, or used infrequently but in a context that is dependent on an understanding from a feminist platform. The aim of this analysis is to assess the ways in which producers of texts have adopted the concept of 'gender' and the extent to which this has changed over time and across journals, since they are assumed to be a proxy for sub-disciplinary boundaries and not just changing editors or other factors. The goal is to trace how gender theories are incorporated into the language of the texts: whether changes in the use of particular words tell us anything about the changing context of gender research in archaeology, and how changes in these perceptions have become more or less visible over the past 40-plus years.

CHAPTER SIX

METHODS

This chapter describes the methodology used in the language and gender component of this thesis. The chapter presents the theoretical frameworks and the research methodology employed. It will discuss the procedures of data collection and the data analysis principles used in the study. The methodology is a hybrid of approaches from corpus linguistics (CL) and the framework of feminist critical discourse analysis (FCDA) adapted for archaeology. By closely examining the numbers, and patterns of usage of words, it is possible to quantify and assess the content of writing on gender as part of a large corpus of writing. This is important also because gender bias and power asymmetries in the present have become increasingly nuanced.

6.1 Preparing the corpus data

In corpus linguistics (CL), as in all types of research, there are certain ethical and legal issues to consider. One of the first and most important considerations is getting permission to use the texts for CL research purposes. Legal opinion was sought from the Flinders University legal team and permission was granted via the university librarian from individual publishers who are the owners of the copyright. The process for gaining permission, in some cases, took up to two years. Permission from copyright owners did not always guarantee complete access to volumes, as only fixed numbers of articles could be accessed at any one time, creating issues in CL data processing. The journal *Antiquity* has been omitted from this study for this reason. In this context accessibility also includes the provision of articles to be reviewed in a format that is compatible for CL applications. Not all articles met this requirement and often required conversion (where possible) into formats that were compatible with the CL software.

The second issue, related to practical considerations of data preparation, concerned the way in which texts were converted into a software-readable format. In some instances, the publication format changed over time. For example, articles published in the 1970s were often scanned photocopies of typed articles, as opposed to later publications in OCR pdf formats. Each article had to be converted into rich text format (rtf) for the CL software to process the corpus; thus, early text had to be converted into OCR pdf format then to rtf, while pdf documents were converted to OCR pdf and then rtf. Each article was downloaded individually and then collated with their respective volumes and converted into an rtf file using the conversion software available through the AntConc site, called AntFileConverter. Thus all downloaded articles were converted into rtf files with the file appendix .txt (e.g. archaeologies.dec.2006.1.txt).

6.2 The process

6.2.1 Corpus construction

The first stage of the process was the creation of the corpus via the download and conversion process described above. In some cases, text clean-up on other information was required, such as figures or by-lines, as anything left in the text file would be identified by text analysis software. The file converter program encountered difficulties with the files of some journals. For example, *Historical Archaeology* used a two-column format for most of their articles, which meant that sometimes the text file would combine sentences from adjacent columns, creating disjointed sentence structure and content. This did not occur all of the time, but was largely dependent on the width of the gutter between columns; in some issues, the gutter was very narrow, causing this problem. While this did not affect the overall count of keywords within an article, it did affect the concordance lines. In these instances, a text clean-up, as well as a close examination of the generated concordance was required around the keyword to determine its context.

Another difficulty occurred around hyphenation of words at the edge of a column. When keywords were hyphenated these were often missed in the keyword count. For

example ‘ fam-ily’ would not be counted in a keyword search for ‘family’, and so manual scrutiny of journals where this type of formatting was used was also necessary.

With earlier published articles dating from the 1950s to the 1980s, which were more recently scanned and uploaded by the publisher, the text conversion software would misinterpret spaces between the typewritten words and, sometimes, a greater number of spaces were inserted into the text document and on occasion into the middle of words. There was also a problem with AntFileConverter reading serif fonts. The *European Journal of Archaeology* was initially selected for inclusion in the corpus for its geographical location/perspectives. However, due to the font style this journal uses, when the pdfs were converted to text files there was a high number of visible errors in the conversion. As the time taken to first identify and then clean up the errors was greater than that taken to run the software and obtain results, it was therefore omitted from this study.

6.3 Using the AntConcordance software

Once conversion from pdf files into text files had been accomplished, the AntConc software could read them. This was done by selecting the AntConc executable file and then following the steps outlined below.

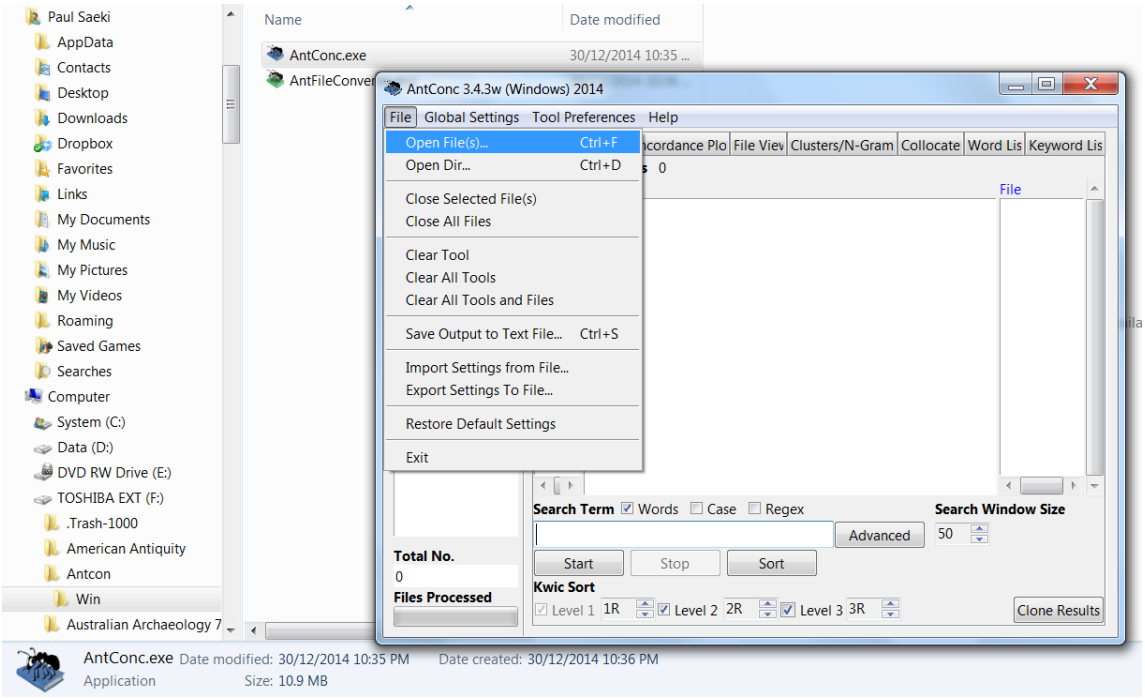

Figure 6: Opening files in AntConc. Press run, then Open File(s) to select the files you wish to analyse.

1. The group of text files was selected, then the keyword was for each word was entered into the 'search box' and the search was commenced. The number of hits returned was manually entered into an Excel spreadsheet, with these files saved under the name of the keyword (Figure 6).

2. Hits (or outputs) were then recorded along with their concordance lines by selecting the 'save output to text file' option (Figure 7). For example, where 'man' was the keyword, the file was given the suffix 'man.txt' and saved to the same location as the text files and the original pdf. Where some journals produced two issues per year, such as *Australian Archaeology*, these were recorded individually by issue and then combined to provide an annual total for the year.

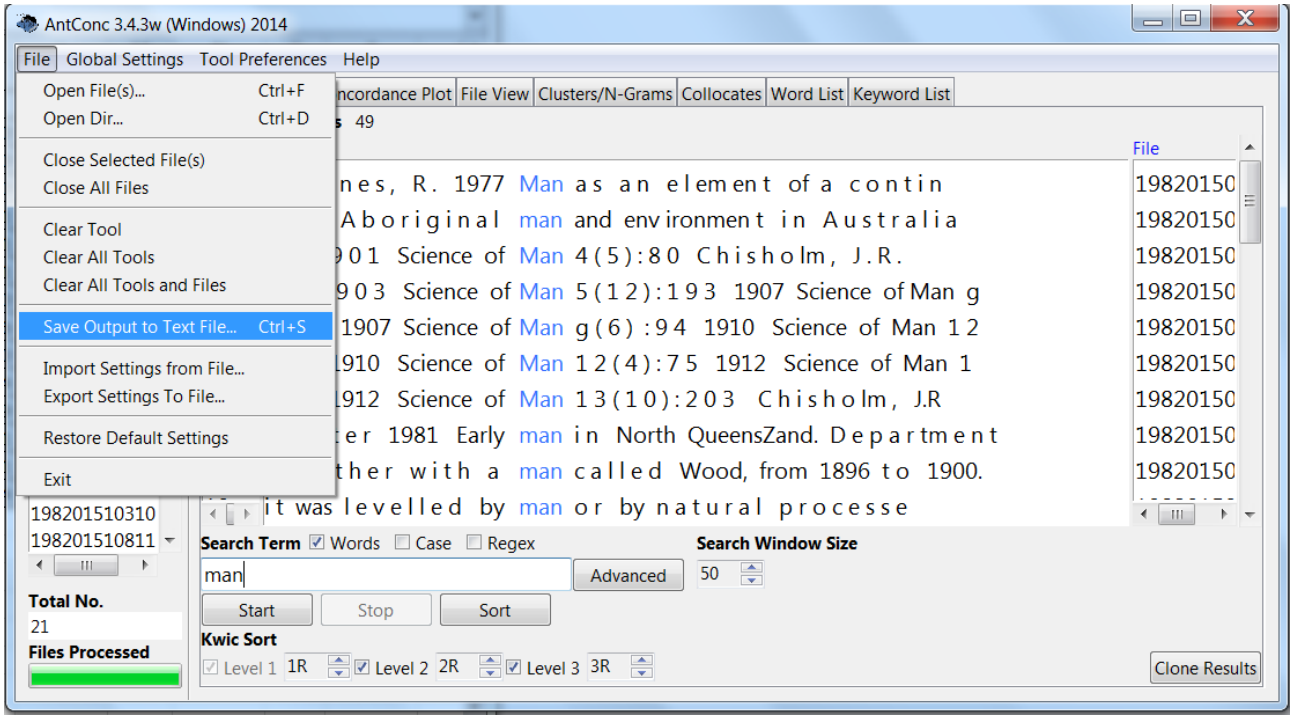

Figure 7: Example of hits for keyword MAN in an article of *Australian Archaeology* and the save output function in AntConc. The keywords are shown in their concordance line.

The AntConc software returns the number of times a keyword occurs in the corpus. This is called the raw frequency. It also displays where in the corpus it occurs (line and paragraph), as well as so-called concordance lines, which show the keyword in question in context (KWIC), with the search term(s) highlighted in the centre of each line (Figure 8). This excludes the most common grammatical article collocates, such as the, a, to and so forth, as they will always be the most frequently occurring words in any text. Up to 50 characters on either side of the keyword were analysed in order to understand the context of keywords.

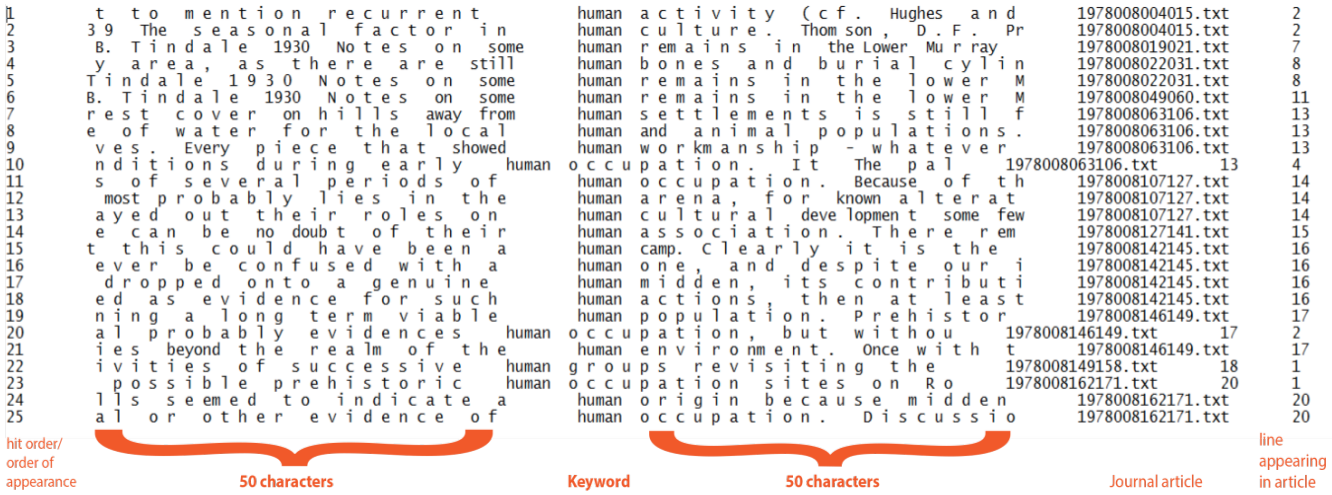

Figure 8: Saved concordance lines for the keyword human (up to 50 characters) appearing in hit order, and indicating where in the article they occur.

3. A collocation was undertaken when the search resulted in ten or more hits for a keyword. This involved selecting the collocate tab at the top of the concordance window. This was to identify binomial gender-related pairs for extraction, and further investigated in order to reveal any potential gender bias. It was important to first change the drop down menu to 'sort by frequency' (Figure 9) before entering 'run'.

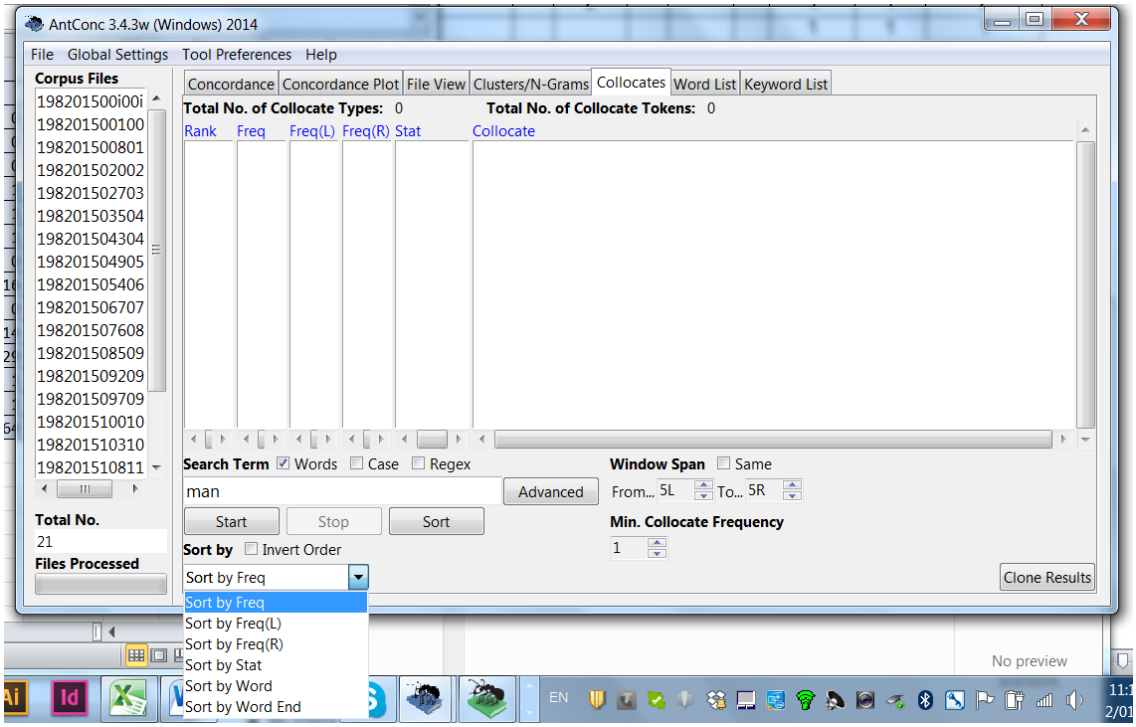

Figure 9: Using the collocation function in AntConc

4. Once the output was produced (Figure 9), the 'save output to text' file option was used, where the keyword was used as the title followed by the suffix '_col' (e.g. man_col)(Figure 10). This was important in order not to overwrite the original keyword text file (for example man.txt)

Keyword: human

```
#Total No. of Collocate Types: 31
#Total No. of Collocate Tokens: 250
1       29      20      9       5.68349 e
2       23      10      13      6.21873 o
3       22      6       16      6.97918 c
4       21      9       12      5.81960 a
5       18      11      7       6.19053 n
6       18      8       10      5.56758 i
7       17      11      6       5.16664 t
8       16      8       8       5.69902 r
9       14      10      4       5.43954 s
10      13      2       11      6.89408 u
11      12      7       5       5.80924 l
12      8       0       8       6.28509 p
13      6       6       0       4.85932 h
14      4       0       4       6.78015 m
15      3       1       2       6.21241 v
16      3       3       0       9.50730 some
17      3       3       0       4.40236 f
18      3       1       2       4.50601 d
19      3       2       1       5.76006 b
20      2       1       1       6.19987 w
21      2       0       2       4.61491 g
22      1       1       0       4.23144 y
23      1       1       0       13.05162        still
24      1       1       0       11.24426        showed
25      1       1       0       6.15680 on
26      1       0       1       10.72969        km
27      1       1       0       7.64223 from
28      1       0       1       7.20613 em
29      1       0       1       13.05162        camp
30      1       1       0       11.05162        away
31      1       0       1       4.84705 and
```

Rank | Frequency | Frequency to the left | Frequency to the right | Stat | Word / letter collocated with keyword

Figure 10: Example of ranked collocates with the word 'human' in text, showing frequency and location either to the left or right of the word.

6.4 Challenges with the data collection

Given the nature of the publications analysed, the initial software capture also counted keywords in reference lists and bibliographies. These were manually sorted and not included in the final keyword counts if they were replicated in the body of the article. In addition, any keywords replicated in tables, headings, captions, images and plates were manually excluded wherever possible.

In terms of counting the keywords, there were occasions where nuances of meaning, idioms or colloquialisms needed to be considered, and a decision was taken whether these would be included as indicative of 'gender' or not, which may have reflected both historical and contemporary stereotyping. My decision whether or not to include them also may have reflected historical and contemporary stereotyping. Examples of these included reference to nationalities, such as German, Frenchman, Chinaman or Englishman. While in the case of German this word was not accepted as 'gendered', in the latter three examples the suffix of 'man' suggests a nationality, but could also indicate the gendered language of man=human. These variants and decisions about what 'counted' as gender were very subjective, and may affect the ability of the methods to be accurately replicated. On this basis they were excluded from the keyword count. In addition, some words, such as 'men', formed components of words such as develop**men**t. Note that this particularly occurred when words are hyphenated in text, i.e. 'depart-ment'. Such words were deleted from the keyword results. A manual review was done of each group of keywords counted in the analysis and adjusted accordingly. While the data was checked and cleaned, there may be additional words which have been missed and increased the MEN and MAN counts minimally, and this is a limitation of the current data sets.

Integrity tests

In order to check the integrity of the method, it was necessary to check the accuracy of the text conversion software. This process involved cross checking the keywords in a random sample of 50 pdf-formatted articles and recording these results in Excel. This involved going through each document and visually conducting a word search for each keyword. The same papers were then run through the AntConc software with the keywords and the hit rate compared. This showed some variation in the results, and an error margin of up to three words in a volume was deemed as acceptable. Although the manual process demonstrated a slightly more accurate result, the system utilising AntConc was able to manage a larger volume of articles in considerably shorter time. The difference in processing times (it takes up to four times longer to screen each

document manually for key words compared to using concordance software) was a major factor in continuing with the software.

6.5 Preparing the data for analysis

Raw frequencies and normalising frequencies

In order to compare frequency counts of keywords across sections of the corpus, a normalization process is required. This involves extrapolating the raw frequencies from the data that are being compared so that they can be expressed by a common factor (such as a thousand or a million words). In other words, as each journal had a varying number of articles, volumes and issues the raw key word count could not be directly compared since they did not contain the same number of words. This means that a simple (raw) frequency count obtained in one part of the corpus cannot be compared directly to another part, as this is neither feasible nor rigorous. For example, in 2001 the term *male* occurred in the *Journal of Social Archaeology* 20 times and in *Historical Archaeology* 21 times; using only this simple frequency count the conclusion might be drawn that male is used at approximately the same rate across both journals. However, because the volume of the written content of each journal is different, it is only possible to obtain an accurate comparison by calculating how many times male occurs per million words, which is the normed count (Lüdeling and Kytö 2008:1299). There are statistical methods and concordance software to help set apart raw and normalised frequency counts, as suggested by Biber et al. (1998:124). This is calculated by:

(frequency of keyword ÷ number of words in a subcorpus*) x 1,000,000

= frequency per million words (pmw)

*This appears as 'Tokens' in the AntConc software. This is another way to describe the total number of words. Thus the sentence:'*To be or not to be; that is the question*' uses only eight words (*to*, *be*, *or*, *not*, *that*, *is*, *the* and *question*), two of which ('to' and 'be') occur twice. Since AntConc counts every word, including repeats, there are 10 tokens in this sentence.

A normed count is a frequency that is expressed relative to some other value as a proportion of the whole—for example, a frequency of a word relative to the total

number of words in the corpus. It is the most direct quantitative data provided by a corpus, but does not itself verify the validity of a hypothesis. Using a normed count allows a comparison of proportional frequencies, so, in the example of 'male' given above, it becomes apparent that, in fact, *male* is used less frequently in *Historical Archaeology* (80.6 words per million) than in the *Journal of Social Archaeology* (175.8 words per million). Some of the research questions could only be answered by looking at the raw frequency data. However, the normed count produces a measure of how frequent a keyword is overall and how it varies across texts in the subcorpus.

For this study all the keyword counts recorded were converted to a proportional frequency as words per million so that all results across all journals could be legitimately compared. Once all of the journals were run through the program and the results recorded in Excel, these results were then converted using the above formulate so that all results were expressed in terms of a frequency per million words (pmw) (see Appendix 1 for all results for raw frequencies and normed counts). This conversion also allows the application of statistical procedures such as mean and standard deviation to explore patterning in the results.

Measurements of collocation: Mutual information

The second statistical conversion used in the methods helped to assess the frequency of co-occurrence of linguistic expressions. This is called the mutual information score (MI) and is a measure of how strongly two words seem to associate in a corpus, based on their independent relative frequency (Church and Hanks 1990:22). To put it another way, in an article of 10,000 words in which the word 'human' occurs 100 times and the word 'civilization' 50 times, including a collocation of 10 times for these two words, the MI calculates as:

MI = log2 (AB * sizeCorpus) / (A * B * span)

Where:

A = frequency of node word (e.g. *human):100*
B = frequency of collocate (e.g. *civilization*):50
AB = frequency of collocate near the node word (e.g. *human* near *civilization*):10
sizeCorpus= size of corpus (number of words; in this case 10,000)
span = span of words (e.g. three to left and three to right of node word):6
log (2) = literally the log10 of the number

Therefore:

MI=log2 (10 x 10,000)/(100 x 50) = 4.321928

MI value for 'civilization' = 4.321928 in relation to the keyword 'human'.

An MI score of 3.0 or higher is taken to be statistically significant because the two items are collocates. The closer to 0 the MI score gets the more likely it is that the two items co-occur by chance, and a negative MI score indicates that the two items are never normally found in combination (McEnery et al. 2006:56).

The benefit of obtaining the MI score is that it can be compared across corpora, even if the corpora are of different sizes, and gives information about lexical behaviour, but particularly about the more idiomatic co-occurrences. In this study, the concern is with binomial pairs of gendered words. The AntConc software provides the MI score for each keyword search, but this MI was manually calculated to analyse specific queries of the corpus. Table 11 is an example of how the MI scores for the word 'gender' in the *Journal of Social Archaeology* were recorded (words such as 'and' and 'a' were always excluded).

Table 4: MI scores obtained for the keyword 'gender' in *Journal of Social Archaeology*

Frequency	left	right	MI	Words
13	7	6	17.68824	women
12	4	8	17.57276	sociology
16	8	8	16.9878	gender
8	1	7	16.9878	differences
20	18	2	16.72476	sex
6	0	6	16.57276	identity
6	3	3	16.57276	connell
4	3	1	15.9878	labour
7	4	3	15.79515	theory
6	6	0	15.57276	impact
5	2	3	15.30973	difference
4	3	1	14.9878	structure

6.6 Data presentation, corpus storage and handling

Microsoft Excel was used to store the data that had been processed in AntConc. The decision to store the corpus in Excel was made on the pragmatic basis that the programme is easily available, relatively user-friendly, and able to generate queries and produce graphs and tables compatible with Microsoft Word files, which meant data could be imported and exported between them. As well as generating queries, Excel also enables selected information columns (or fields) to be sorted. This was done for a range of queries, such as sorting by year, issues, volumes, keywords, etc. At this stage, a second phase of data cleaning was sometimes necessary when misspellings resulting from text transcription occurred or when there were obvious errors in the data, such as an unusually high frequency of a keyword result. The inclusion of contextual information was kept as concordance lines in the AntConc notepad files, as well as Excel spreadsheets.

Practical considerations of data storage involved not only decisions on the format of the data, but also on the whole storage system. Straightforward Excel files were sufficient for this study without the need for a more complex relational database. Sub-corpora were created by putting the texts into the same folder, or by merging several text files into a single text file. Coded file names were essential for selecting relevant texts from the whole corpus for certain analyses.

Having downloaded, processed and filed the data, it was then possible to classify, rearrange and analyse the corpus in various ways. Fairclough's (1992, 1995) tripartite model (e.g. wordlists, keyword lists and concordance) was merged with FCDA principles in order to investigate the results. Areas of interest were highlighted through frequency lists and keyword lists, which were then taken as the starting point for a subsequent close analysis through the examination of concordance lines and of paragraphs where needed. This approach aligns with work by Stubbs (1996:212), who emphasised the need to combine the analysis of large-scale patterns across long texts with the detailed study of concordance lines. In summary, the corpus was stored for analysis through the following steps or lines of inquiry:

1) Each key word was calculated for each journal article in the corpus, then saved into an Excel spreadsheet.

2) Keyword calculations of each journal issue and volume were saved for each year, beginning with the first issue of the journal and ending with December 2013.

3) Where a keyword was located in a text (or had a 'hit') the concordance (with 50 characters either side) was saved and linked in an Excel spreadsheet.

4) Where a keyword was located in a text (or had a 'hit') 10 times or greater, the collocation function was run and downloaded as text files for further investigation, and data copied into Excel.

5) All results were converted to normalised frequencies (pmw), and MI scores were recorded in Excel.

CHAPTER SEVEN

RESULTS

'Choice of words expresses an ideological position' (Stubbs 1996:107).

Keyword frequency and collocations are understood as language intentionally authored, yet unintentionally patterned. That is, while the choice to describe evidence through certain terms and words in an article is carefully fashioned by an author (or authors), the creation of such patterns across the corpora is an unintentional product of a collective ideology, in this case, about gender. The vocabulary utilised by an author is indicative of the individual's discursive universe, and the deployment of this discourse can illuminate the tropes, epistemologies, borders and concepts that frame their community (Fairclough 1995:2).

In this chapter, word choices are examined through an analysis of frequency, collocation and concordances. These results document the changing conceptualisation of gender and representations of men and women in archaeological journals from 1947 to 2013. The techniques used draw on the corpus-driven paradigm of corpus linguistics research (Tognini-Bonelli 2001) to provide a 'map' of areas of interest in the literary landscape. That is, at the outset of the analysis, relative frequencies and emerging significant patterns in the corpus under investigation are extracted, and then closely examined with their collocates and in their concordances. This approach is in accordance with Stubbs (1994:212), who argued for the need to combine the analysis of large-scale patterns across texts with the detailed study of concordance lines.

A caveat is in order here. The data sets (Appendix 1-8) are multifaceted, and contain a number of variables; it is possible to analyse various combinations of keywords in terms of frequency, collocates and concordances, or any combinations of these in any journal,

at any time. Accordingly, the data has not been analysed in the many, almost infinite, ways that are possible, but according to the results that are most relevant to the questions posed in this thesis, with emphasis on a diachronic analysis of 'gender' and its associated concepts. In addition, the exploration of individual words ('women', 'men', 'sex', 'family', etc.) does not in itself lead to all-inclusive results about gender representations (as gender representations can be articulated in a myriad of unstated words and expressions), but is used to elucidate gender-thematic focal points in each article. These are then examined more completely to gain an increased degree of subtlety and depth.

Several hypotheses central to addressing the research questions are interrogated through the results presented in this chapter. Firstly it is predicted that the gender-related terms referring to MEN and MALE will be more numerous and exhibit more variation than the corresponding terms referring to WOMEN and FEMALE. As pointed out by Romaine (1999:108–109), even in contemporary Western society today, where men and women have greater equity (at least as compared with last century), men are mentioned more frequently than women, and often in more detail. This presumably leads to both a greater frequency of words denoting men and greater variation in these terms. Given the predominant position of men in academia in the 1950s to the 1980s, one might expect this to be true in texts from this period as well. The second hypothesis is that the gender-related terms will tend to focus on different roles or tasks, depending on whether the research subject is male or female. This is based on a combination of the literature review in Section One, where activities and the division of labour were mostly viewed through a male lens, and by previous socio-historical views that men were more commonly seen as having an occupation (e.g. carpenter, warrior) that was more important to human society than women, who stayed at home and raised children. Conversely, it may be that in journals such as HA, there may be more collocations with WOMEN and FEMALE in terms of their relation to others in the community, marital status, or in relation to men. Thirdly, I hypothesise that adjectives used in connection with gender-related terms will differ between the older, established journals (*American*

Antiquity, Historical Archaeology and *Australian Archaeology*) and the more recently established ones (*Journal of Social Archaeology, Journal of Archaeological Method and Theory* and *Archaeologies*).

7.1 Summary of results of all keywords in all journals

The results for the proportional frequency of all keywords across the sample of six journals provide the 'big picture' (Table 5 and as expressed in Figure 12). The keyword analysis below is a 'tool' used to provide the entry point into each article (and journal) and to determine if it is gender-relevant/gender-non relevant (or any other potential classification). The over- or under representation of key terms can be strong evidence for bias, which is then a ground for qualitative examination (Baker 2014:13). The frequency of the keywords also provides information on what is frequent and typical in the given data set. The aim is to reveal salient contextual elements—'trigger events' (Gabrielatos et al. 2012)—pinpointing periods of increased reporting on a topic to reveal differences, similarities (e.g. Taylor 2013) and absences (Partington 2014).

It is worth restating that, because the written content of the journals is different, an accurate comparison of keyword usage can only be obtained by calculating how many times the keyword occurs per million words (pmw); in other words, the normed count (Biber et al 1998:263). The 'raw' frequencies are the total number of times the keyword appears in a given article (Appendix 1). To obtain the normed count, the raw frequency of the given word is divided by the total number of words in the article. This gives the proportion of a certain word to the number of words in the whole. This figure is then multiplied by the chosen norm number—this study norms to 1,000,000 —to conclude how many times the word would occur per normed (1,000,000) words, i.e.

$$\text{normalised result} = \frac{\text{\# of instances of the word in the corpus} * 1{,}000{,}000}{\text{total \# of words in the corpus}}$$

Thus, for example, the word FEMININE occurs 0.9 times in every million words published in articles in *Australian Archaeology* (AAA)—literally occurring once in a million (see Table 5).

Table 5: Average results of all keywords (as words per million) across the six journals

Keywords	Journal of Archaeological Method and Theory	Archaeologies	Journal of Social Archaeology	American Antiquity	Historical Archaeology	Australian Archaeology
gender	357.6	417.0	482.5	109.0	188.35	181.9
masculine	20.0	24.6	16.2	3.8	4.4	1.6
feminine	6.6	14.7	9.7	3.5	6.7	0.9
male	122.1	128.5	185.2	108.3	87.4	107.8
female	154.3	82.8	241.2	92.9	68.1	90.6
men	274.6	429.0	299.1	198.3	359.3	192.1
women	511.5	817.9	585.3	211.1	477.7	328.9
man	246.3	225.4	262.1	370.4	208.9	328.7
woman	69.2	128.5	91.7	48.9	75.8	30.4
human	1363.1	702.8	923.3	671.9	221.25	964.6
people	738.6	1432.3	1589.1	514.9	546.6	1108.2
family	204.0	233.8	212.5	135.0	418.5	100.8
children	246.8	183.9	144.9	78.2	212.5	75.5
sex	67.5	73.7	146.8	69.4	59.8	59.1

The data can also be expressed graphically as the proportional frequency of all words across all journals (Figure 11), which clearly demarcates the difference between the highest frequency word—PEOPLE—and the lowest frequency word—FEMININE.

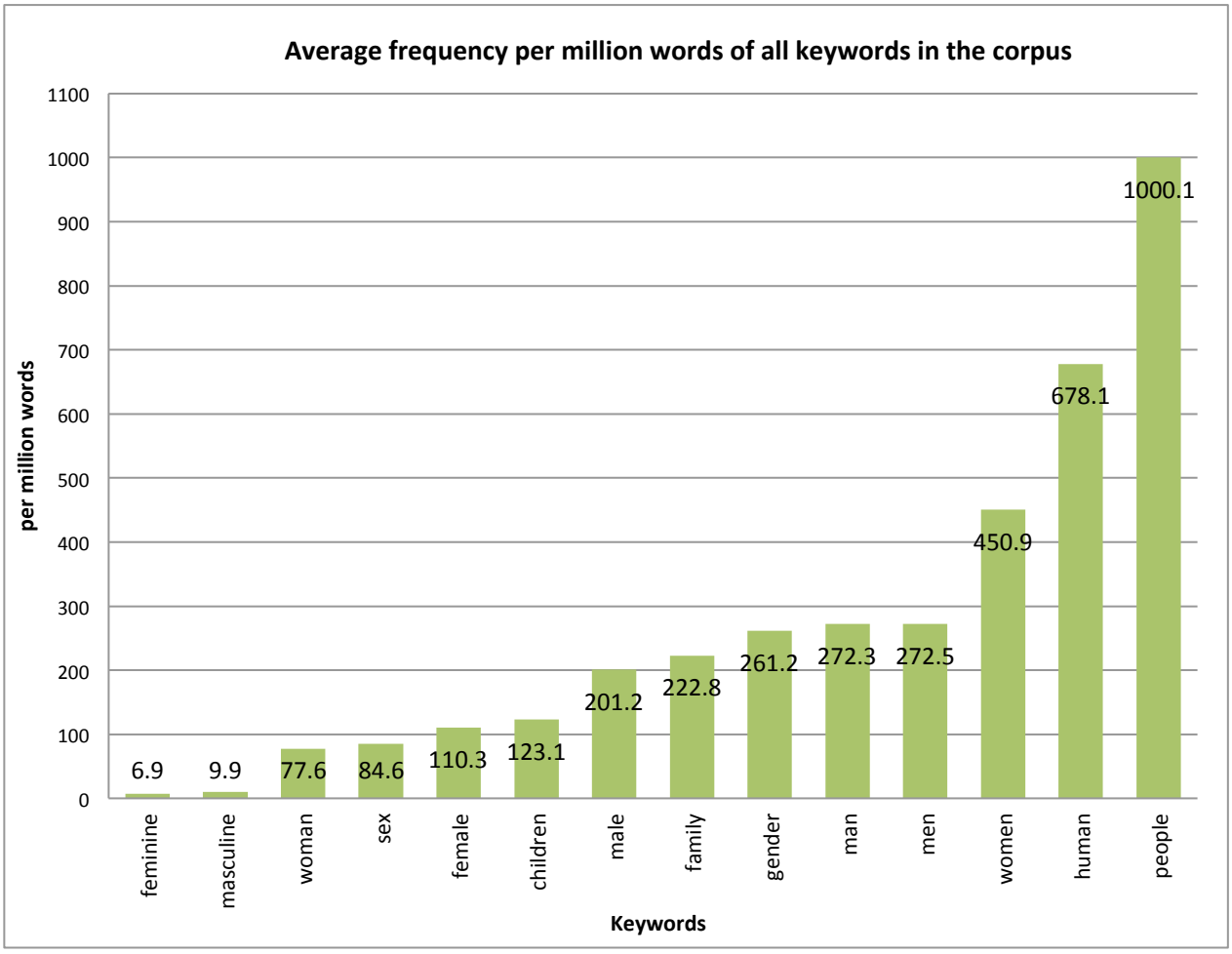

Figure 11: Average of all keywords (per million words) across all journals

The word PEOPLE was used most often (1000 times pmw), followed by HUMAN (678 pmw). These numbers can be interpreted as a baseline, or an indication of the average content of 'socially' focused discussion. The content around men, women and gender thus falls below this baseline.

Some of the keywords used represent dichotomies or 'binomial pairs', for example male/female and man/woman. However the words MEN and MAN occur at higher rates

than FEMALE and WOMAN, both occurring at 272 pmw. Interestingly, with the exception of *American Antiquity* (AA) and *Australian Archaeology* (AAA), all journals had a higher frequency of the word WOMEN as opposed to MEN (a total frequency of 451 and 272 pmw words respectively). This is the third highest count of the fourteen keywords. This could be an indication of the 'men as norm' theory, where MAN can possibly be used generically to refer to human beings rather than MAN as the opposite sex of WOMAN, and where women are explicitly mentioned as research subjects, hence there is more focus on women as a group.

GENDER (261 pmw) occurred at about the same rate as MEN (272 pmw) and it could be inferred that, as gender has become a term more closely associated with women, GENDER is used as the opposite of men, or as a replacement term for women. Conversely, MAN occurs much more frequently (272 pmw) than WOMAN (77 pmw) and is perhaps a combination of the legacy of man=human in combination with specific political contexts, such as 'Indigenous man' or even 'white man' in more recent articles. Most surprising was the very low frequency of both MASCULINE (10 pmw) and FEMININE (7 pmw), given that these terms are routinely associated with gender as a social process (for example, traditional masculine roles, historically feminine behaviours, etc.). SEX was used very infrequently at only 84 pmw, and not at the same rate as the word GENDER (261 pmw). FAMILY (223 pmw) was used at a higher rate than CHILDREN (123 pmw) across all journals.

7.2 Keyword results[1]

7.2.1 Gender

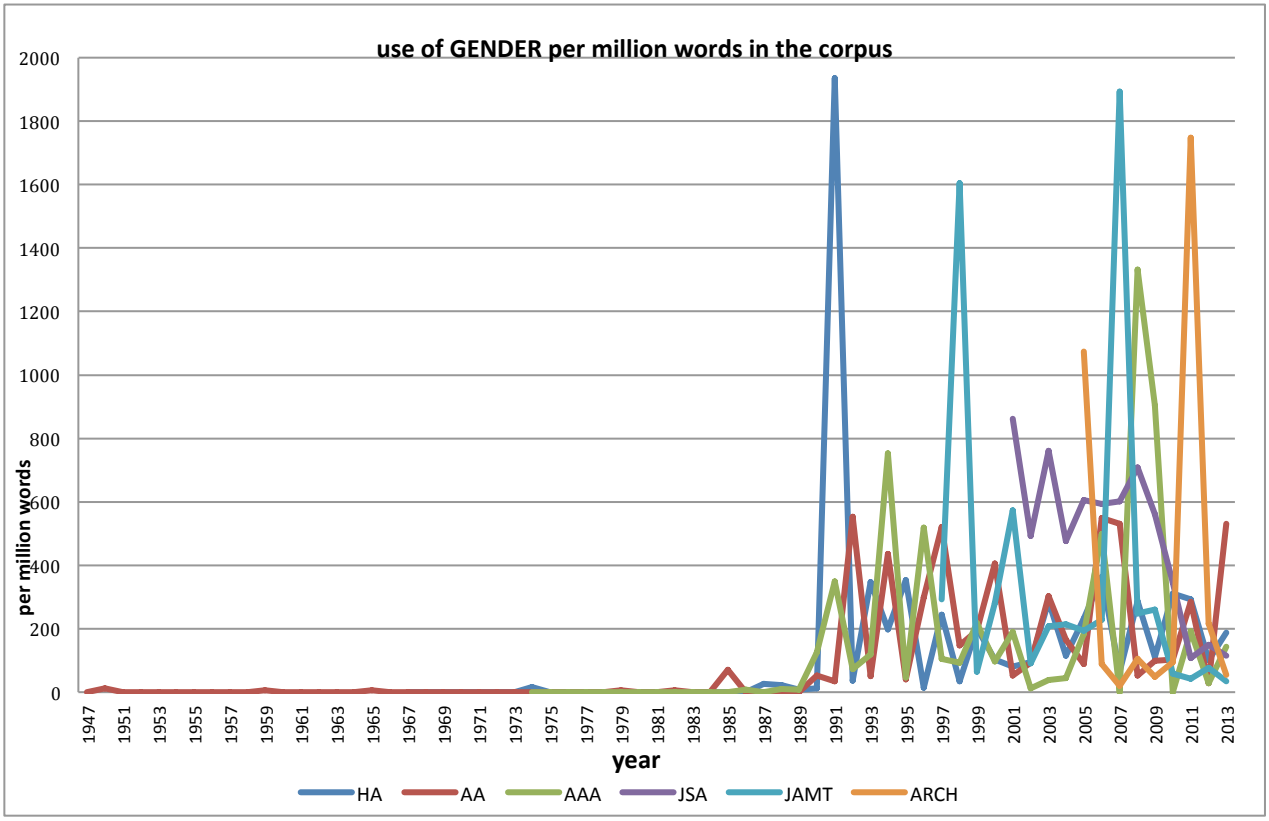

Figure 12: Use of the word GENDER per million words (pmw) in the corpus

When considering the keyword GENDER over time, there is a skew in the distribution of results to the right, demonstrating an increase in use over time (notwithstanding the inclusion of the data from the three additional journals). The earliest use of the word in this data set is the 1950 edition of the journal *American Antiquity* (AA), where it appeared at a rate of 12 pmw, then again in 1959, at a rate of 5 pmw. It next appeared in 1985 at 70 pmw, and then in each issue from 1990 onwards, but inconsistently in peaks and troughs as seen in Figure 13. In AA, the peak of the word's usage was in 1992,

[1] In this section each graph has used the normed count unit (pmw), so results can be directly compared. However, the graphs produced in this thesis vary in scale, so as to capture as much detail as possible. For example, the graph for gender shows up to 2000 pmw on the y-axis but the graph for masculine only 200 pmw. All are reproduced in more detail in Appendix 1. They are also right skewed in appearance as a result of the later establishment of three of the journals used.

at 552 pmw.

GENDER first occurred in the journal *Historical Archaeology* (HA) in 1974 (15 pmw), and then in 1987 (26 pmw). The highest frequency of word use was in HA in 1991 (1934 pmw). This was also the highest occurrence of the word GENDER for the entire corpus. *Australian Archaeology* (AAA) first mentions GENDER in 1986 (8 pmw), then again in 1991 (349 pmw). 2008 witnessed the highest frequency of use in AAA with 1332 pmw, followed by 904 pmw in the following year.

The *Journal of Social Archaeology* (JSA) launched with a (relatively) high usage (861 pmw in 2001), but this was also this journal's peak; results show a consistent downward trend after this and particularly after 2010. The *Journal of Archaeological Method and Theory* (JAMT) recorded two peaks, one in 2007 (1894 pmw) and another in 1998 (1603 pmw), but GENDER is used minimally after 2007. *Archaeologies* (ARCH) similarly has two peaks: its first issue in 2005 (1073 pmw) and then in 2011 (1747), before a decline in subsequent years.

In view of the wider adoption of gender as a concept relating to social distinctions between males and females and sex as a reference to biological differences in the 1960s, it is apparent from Figure 12 that there was a significant time lag in the appearance of this distinction in archaeology. The appearance of the word GENDER has a slow, gradual increase in uptake, only peaking in the 1990s. There is, however, not a gradual, linear progression across all journals. The data show the use of GENDER has not been exponentially increasing, but is an ephemeral subject that comes in and out of focus, as evidenced by the many peaks and troughs. Figure 12 also signifies that usage of the word GENDER in archaeology is far from ubiquitous, given it is mentioned on average fewer than 300 times in every million words published, with most counts clustering in the lowest band on the graph.

By linking the data from Figure 12 to Section One of this thesis, it is apparent that a higher count for GENDER is reliant on special issues or follows events (such as

conferences) where the word's usage suddenly spikes. For example, the highest score for GENDER in the corpus is in HA in 1991 (volume 25 (4)). This was a special issue entitled 'Gender in Historical Archaeology'. In 1991 the second 'Gendered Archaeology: Women in archaeology' conference was held and saw the publication of a monograph of the proceedings, *The Archaeology of Gender* (in this year the edited volume, *Engendering Archaeology: Women and Prehistory* was also published). AA had its peak usage in 1992 (Volume 57 (1)) due to the publication of an article by Alison Wylie summarising work in the area of gender archaeology. Similarly the relatively high frequency in 1998 in JAMT was due to an article by Erica Hill in Volume 5 (1). In 2001 the JSA's first volume (2001) published papers by Maria Franklin and Gustavo Politis, both of which were gender themed, which accounts for the highest frequency of the word in its lifespan. In 2008 AAA published a special issue (volume 67) 'More Unconsidered Trifles', a tribute to the work of Sandra Bowdler and her interests, one of which is women in archaeology. In 2005 *Archaeologies* saw an article and further commentary on Meg Conkey's paper 'Dwelling at the margins, action at the intersection? Feminist and indigenous archaeologies, 2005'. The subsequent Volume (7 (1)) in 2011 was a special issue, 'The Impact of Feminist Theories on Archaeology'.

7.2.2 Masculine

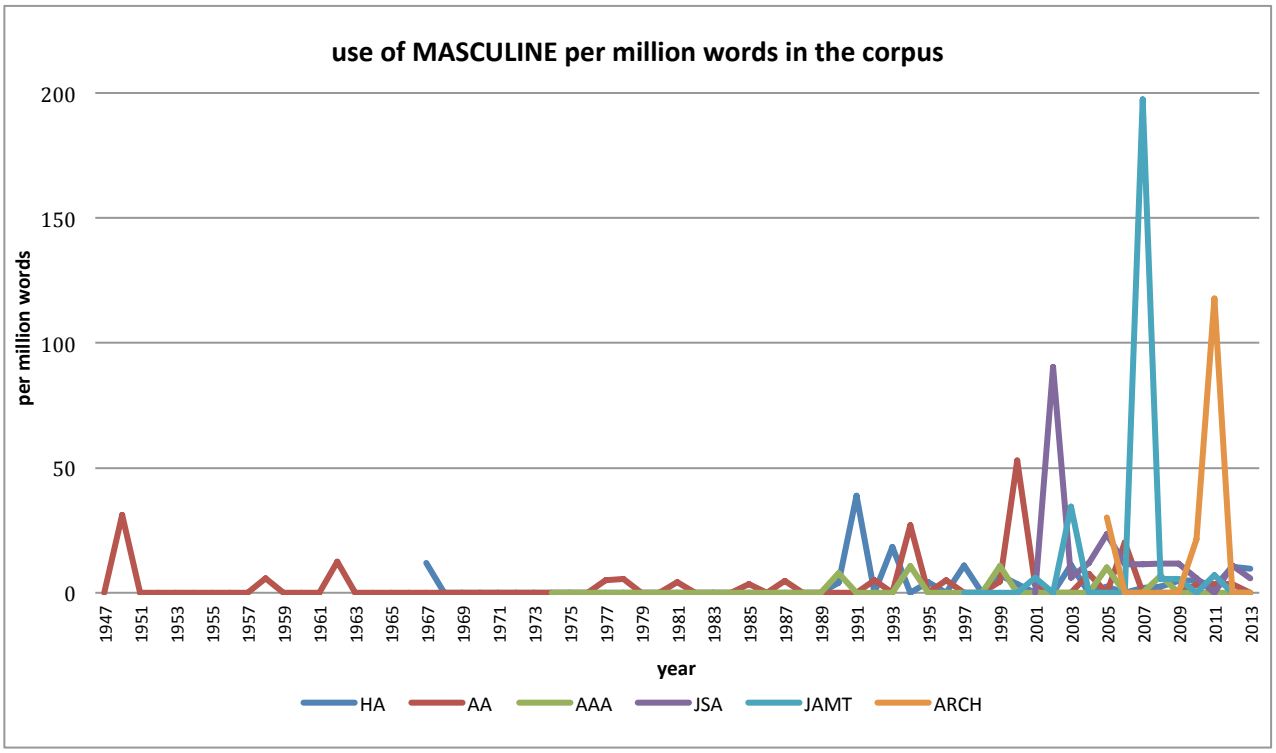

Figure 13: Use of the word MASCULINE (pmw) in the corpus

In English, semantic or embodied gender is almost always aligned with 'masculine' and 'feminine' grammatical categories. According to Cameron (1998:971), ''feminine' and 'masculine' are not what we are, nor the traits we have, but effects we produce by way of particular things we do'. In this sense both have consequences for archaeological interpretation. Until recently, little attention has been paid to the attitudes and values encoded in the labels used for men and women (Persson and Rydén 1995:145). The results for two labels, feminine and masculine, are discussed below.

As shown in Figure 13, MASCULINE first appears in the corpus in 1950, occurring at 31 pmw in AA. This journal's highest count occurred much later in 2000 (52 pmw), with two other peaks in 2002 (JSA 90 pmw) and 2011 (ARCH 117 pmw). These three are somewhat outliers, as most incidences are below 50 pmw. Overall, these results reflect very low counts, and indicate an absence of content across time in all journals considered. In AA there are only minor mentions of MASCULINE: fewer than 5 pmw in

the 1960s through to 2013, with small peaks occurring in 1994 (26 pmw) and 2006 (20 pmw).

In HA, MASCULINE occurred at a minimal rate across the lifespan of the journal, with peaks of 38 pmw in 1991, and 18 pmw in 1993. It occurs in each issue from 2007 to 2013, though at a rate of 11 pmw or less. Similarly, AAA has little discussion around the term, referred to no more than 10 pmw in any issue, and all results are clustered in the 1990s. The same trend of small peaks and silences is noted across AA, HA and AAA.

In ARCH, MASCULINE appears 117 pmw in 2011, the second highest number overall, explained by a special issue, 'The Impact of Feminist Theories on Archaeology', but there is a complete absence of the term in most other years of the journal. Across all journals the highest frequency was 197 pmw in the JAMT in 2007. This can be accounted for by Issue 14(3), which was devoted to feminist themed papers, with contributions by Conkey, Gero, Joyce and Tringham, Moser, Tomášková and Wylie. This journal also has a small peak of 34 pmw in 2003, but on the whole MASCULINE is not mentioned more often than 5 pmw between and after these peaks. JSA fares marginally better, with a small peak of 90 pmw in 2002 (due to Harrison's 'Kimberley spearpoints, cultural identity and masculinity in the north of Australia'), and then 23 pmw in 2005, with negligible use in all other issues.

7.2.3 Feminine

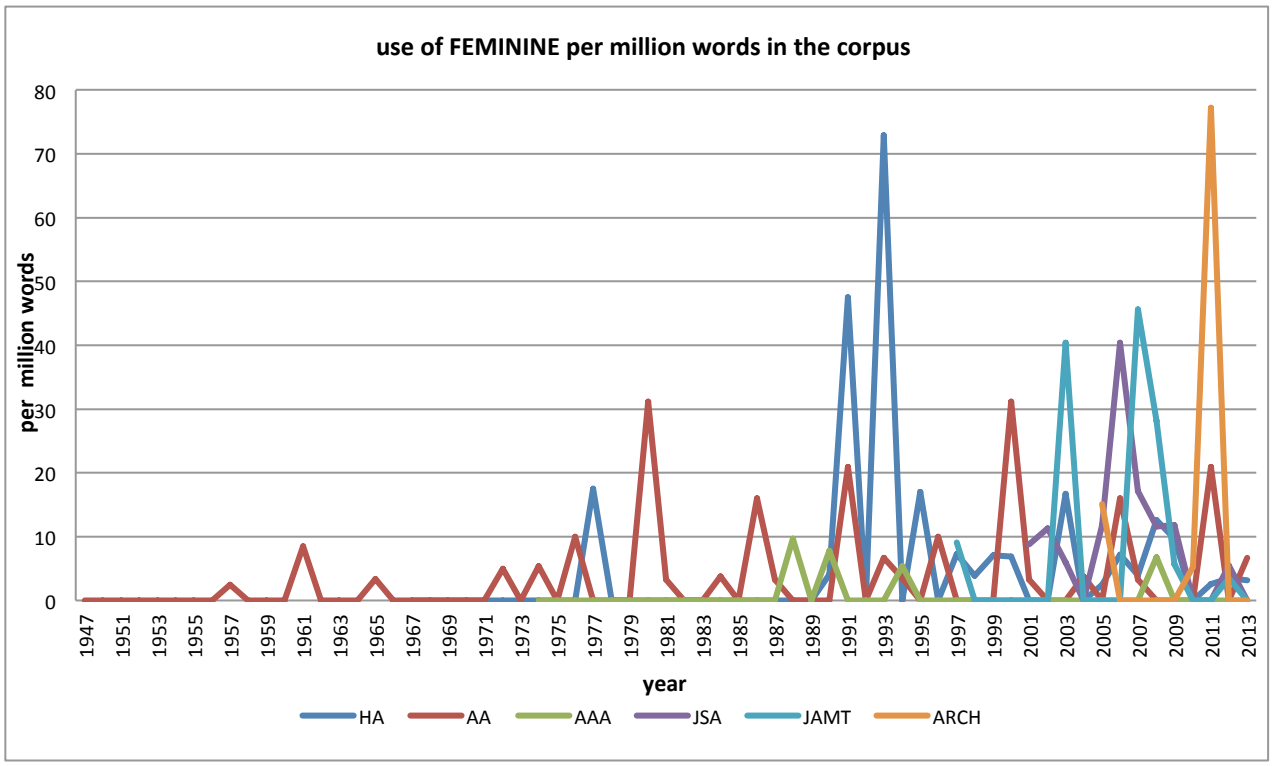

Figure 14: Use of the word FEMININE (pmw) in the corpus

FEMININE is the keyword that is used least often. Figure 14 shows that it first appeared in the literature in 1957 in the journal AA, at a rate of just 2.5 pmw, then again in 1961 at 8 pmw, and subsequently at a rate of fewer than 10 pmw in irregular instances in the 1960s and 1970s. AA's highest value occurred in both 1980 and 2000, at a rate of 31 pmw. FEMININE then declines again to 16 pmw in 2006 and 20 pmw in 2011. This pattern is characteristic of the entire corpus, with significant clustering in the lowest band of 10 pmw or below (see Figure 14).

In HA, FEMININE was first used in 1977 at a frequency of 17 pmw, in 1990 with 4 pmw, and 1991 with 47 pmw (again explained by the 'Gender in Historical Archaeology' special volume). The highest frequency for HA, however, was 72.9 pmw in 1993, attributed to Joyce M. Clements' paper in 27(4), 'The cultural creation of the feminine gender: an example from 19th-century military households at Fort Independence, Boston'.

AAA has its first mention of FEMININE in 1988 with 9 pmw, and then in 1990 with 7 pmw, 1994 with 5 pmw and 2008 with 6 pmw. In all other issues the count was zero. In 2006 JSA reached a peak of 40 pmw, making its use of FEMININE relatively low compared to other keywords, particularly for a socially-focused journal. JAMT fared marginally better, with a rate of 40 pmw in 2003, followed by a peak of 45 pmw in 2007, but FEMININE occurs fewer than 5 pmw in all other issues.

The highest value for FEMININE across the corpus occurred in ARCH in 2011, at 77 pmw. This is significantly lower than the peak number for MASCULINE (197 pmw), which occurs four times more often. This is attributed to an ARCH Volume 7 (1) 2011's special issue, 'The Impact of Feminist Theories on Archaeology'. Overall, MASCULINE was used most in the JAMT, followed by ARCH and the JSA. FEMININE was mentioned more often in HA, followed by JAMT and ARCH.

7.2.4 Sex

A key concern of this study was whether there was change over time in the use of 'sex' to 'gender', to gauge whether archaeologists have made efforts to understand broader social theory about the differences between the two. The etymology of the word GENDER is from 14th century understandings of genre and genus (i.e. type, kind, origin). This meaning was extended in the 15th century to the human phenomenon. This led to 'gender' being used as a euphemism for 'sex', where both words could refer to social or biological differences. Despite ongoing controversies across the social sciences around the nuances of the terminology, people who now engage in research about sex and gender would probably agree that they are not synonyms (see Pryzgoda and Chrisler 2000; Varga 2010). However, according to Burridge (2012:22) in recent years GENDER has been adopted in common English language usage to the extent that it has again become a euphemism for SEX. The word 'sex' has thus been redefined to refer specifically to sexual intercourse or sexual assault, as well as biological sex, because people may feel uncomfortable with it in any other context.

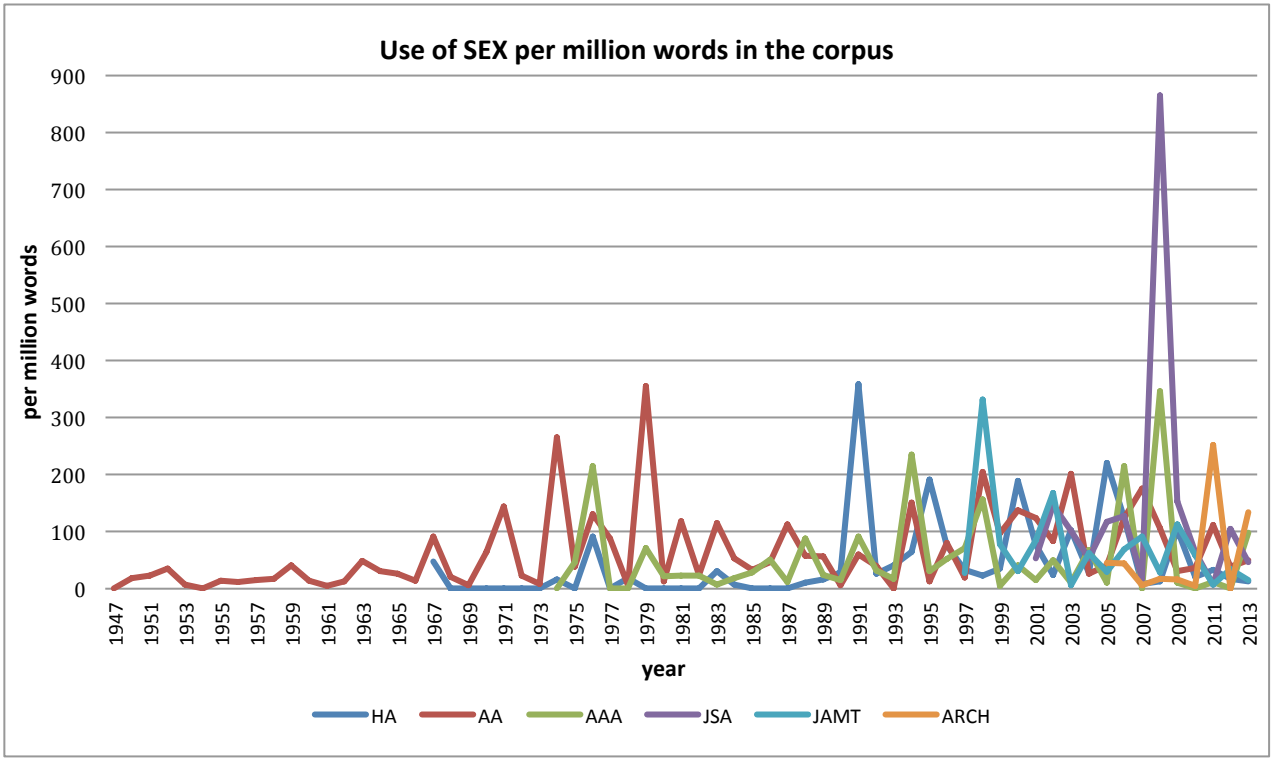

Figure 15: Use of the word SEX (pmw) in the corpus

A lower than expected overall result for SEX, with counts clustering in the band 100 pmw or lower is likely due to misuse, combined with a reluctance by archaeologists to write about anything 'sexual'. According to Torgrimson and Minson (2005) there has been a general rise in gender being (mis)used to describe biological sex in scientific publications and researchers are still only vaguely aware of the appropriate use of the two terms. This phenomenon is reflected in the data shown in Figure 15, where the use of SEX steadily increased in frequency between the 1970s and 1990s in older journals, then stalled across all journals after 2000, declining rapidly after 2010. This might reflect the wider cultural trend in many western countries since 2000 to reject the entire concept of 'sex differences' in favour of LGBTI-appropriate gender 'neutral' terms. The overall frequency for SEX is less than that for gender, but the word is used more often and in more issues. So, while GENDER has a higher number (attributed to more peaks caused by special issues or articles), SEX is used more often overall.

Over the lifespan of AA, SEX appears at a rate of between 50 to 100 pmw, with concentration in the lowest quartile. There are peaks in the 1970s, with 1979 recording the highest use of 355 pmw, and between 1994 and 2007, when there were four peaks (up to 200 pmw).

HA overall uses SEX less than AA, with many more null values through the 1970s and 1980s. 1991 was again HA's highest recorded frequency, with 358 pmw. There were smaller peaks in 1995 (191 pmw), 2000 (189 pmw) and 2005 (220 pmw), and on average GENDER was used more often than SEX in HA after 1991.

JSA recorded the highest rate of SEX at 864 pmw in 2008. Figure 16 clearly demonstrates this peak, which is somewhat of an outlier compared to the overall pattern of results. This is due to Pamela Geller's article in 2008, 'Conceiving sex: Fomenting a feminist bio-archaeology'. AAA's use of SEX is characterised by peaks and troughs, but with an overall increase in frequency. The highest peak was 346 pmw in 2008, with smaller ones in 1976, 1994, 1998, and 2006.

JAMT had its highest usage in 1998 (331 pmw), after which frequency decreased, though in a non-linear manner, until 2013. In ARCH, SEX occurred at a much lower rate than GENDER, but reflected more closely the pattern of the words MASCULINE and FEMININE, with a peak of 251 pmw in 2011. Overall, when comparing rates of SEX and GENDER, SEX occurred most frequently in the JSA, followed by HA and AA; GENDER occurred most frequently in HA, followed by JAMT and ARCH.

7.2.5 Man

An aspect of bias discussed by Baker (2014) and Cooper (1984), amongst others, is the generic use of male terms to refer to any or all humans or living creatures. Hellinger and Bussmann (2001:10) argued that the 'the choice of masculine/male expressions as the normal or 'unmarked' case with the resulting invisibility of feminine/female expressions are reflections of an underlying gender belief system, which in turn creates expectations

about appropriate female and male behaviour.' For many years feminists such as Spender (1980) argued that terms like 'he' and 'man' contribute to making women invisible—that is, obscure women's importance, and distract attention from their existence—since there is psycholinguistic evidence that those who encounter sentences using the terms 'he' and 'man' think more readily of males than of females (Saul 2007). The call to stop using MAN to refer to generic humans was advocated across academia and by most journals by the 1990s. The evidence for this change, however, is not as marked as expected (see Figure 16).

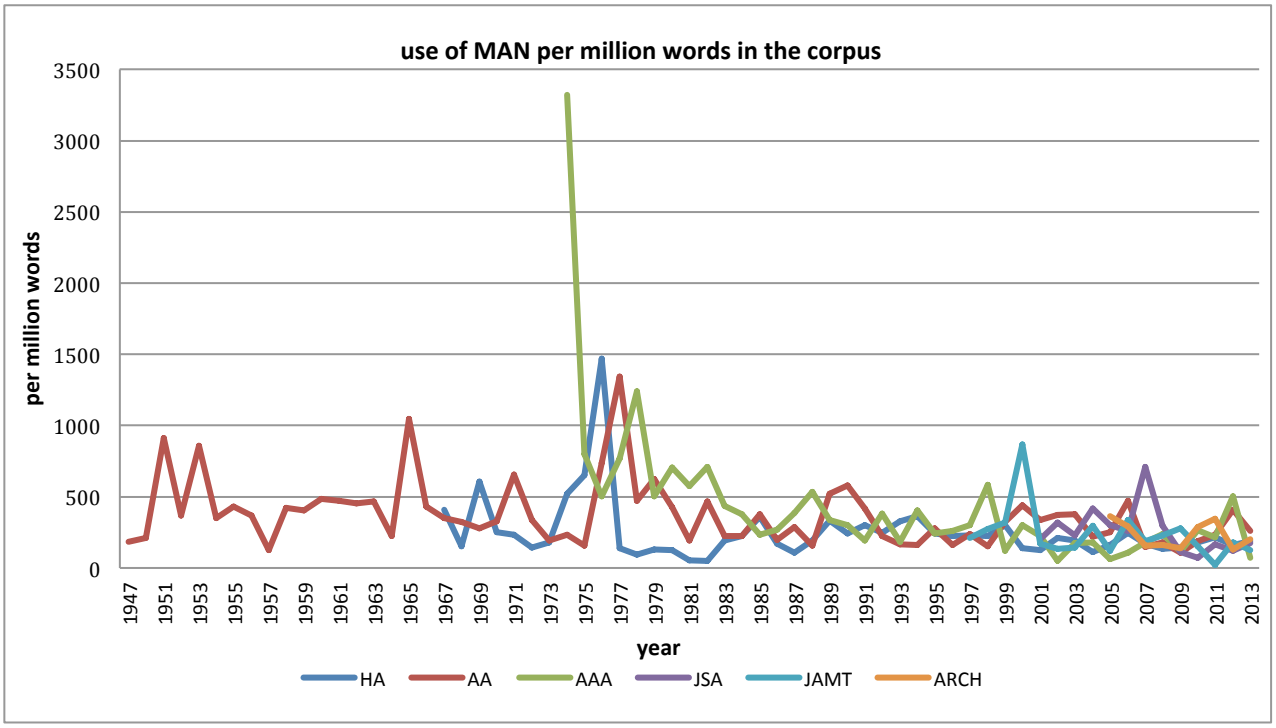

Figure 16: Use of the word MAN (pmw) in the corpus

The appearance of the graph for MAN (Figure 16) is visually different to previous examples, as there is a consistently higher score for the word across time, commencing with values in the band over 500 pmw in AA. Across time, the word peaks at 914 pmw in 1951, 857 pmw in 1953 and 1047 in 1965, with no null values in any journal. In fact, AA is consistently around the 500 pmw until the 1990s, when there is a gradual decline. Its peak usage is 1343 pmw in 1977. There is a consistent range of 150 to 200 pmw from 1990 to 2013, and the lowest score is 106 pmw in 2009. HA follows a similar pattern, but with one large peak at 1470 pmw in 1976 and a decline in use throughout the 1980s,

with the lowest frequency of 49 pmw in 1982. The values are then relatively consistent, varying between 100 to 150 pmw, until 2013.

The score of 3321 pmw in AAA in 1974 is a prominent feature on Figure 17. This was followed by 1238 pmw in 1978, falling consistently until the lowest result of 50 pmw in 2002. AAA is characterised by a relatively high use of MAN in relation to the other journals, with articles such as 'Man in Australia: present and past' by J. Peter White (1974 (1)), accounting for high scores, and the general substitution of MAN for human, with results close to 500 pmw on average until the 2000s.

The lowest score was 21 pmw in JAMT in 2011. This journal had an outlying peak of 865 pmw in 2000; this is the highest number since AAA's 1978 figure. This is accounted for by Paul Roscoe's paper 'New Guinea leadership as ethnographic analogy: a critical review' in Volume 7(2), where the 'Big man archetype' is a theme. In ARCH the use of MAN commences with 362 pmw in 2005 and peaks in the 100-200 pm word range in 2013. The JSA has a high in 2007 (709 pmw), but a low of 70 pmw in 2010. This is reflective of a general downward trend after the late 2000s, which shows that, although there are fluctuations from decade to decade, there is an overall decrease in the use of generic MAN after 1974, gradually declining to a rate of 150 to 450 pmw across all journals (Figure 16). A diachronic analysis comparing the three periods 1947-1967, 1968-1988 and 1989-2013 points to a decrease in MAN references, and implies a gradual process of sociolinguistic change in which MAN seems to be progressively less significant in JSA, JAMT and ARCH, but is still used around 200 to 400 pmw.

7.2.6 Woman

A comparison of the frequencies of WOMAN provides an easy way of demonstrating male bias or androcentrism, and the extent to which this bias is changing over time. Figure 17 shows several important trends. First, across the time period sampled, references to MAN are always higher. In the later period, post 1985, this ratio is still more than ten references of MAN to every one of WOMAN. While references to

WOMAN appear to have increased during the 1990s, this levelled off in the early 2000s, and by the 2010s MAN still leads, although only by a small margin.

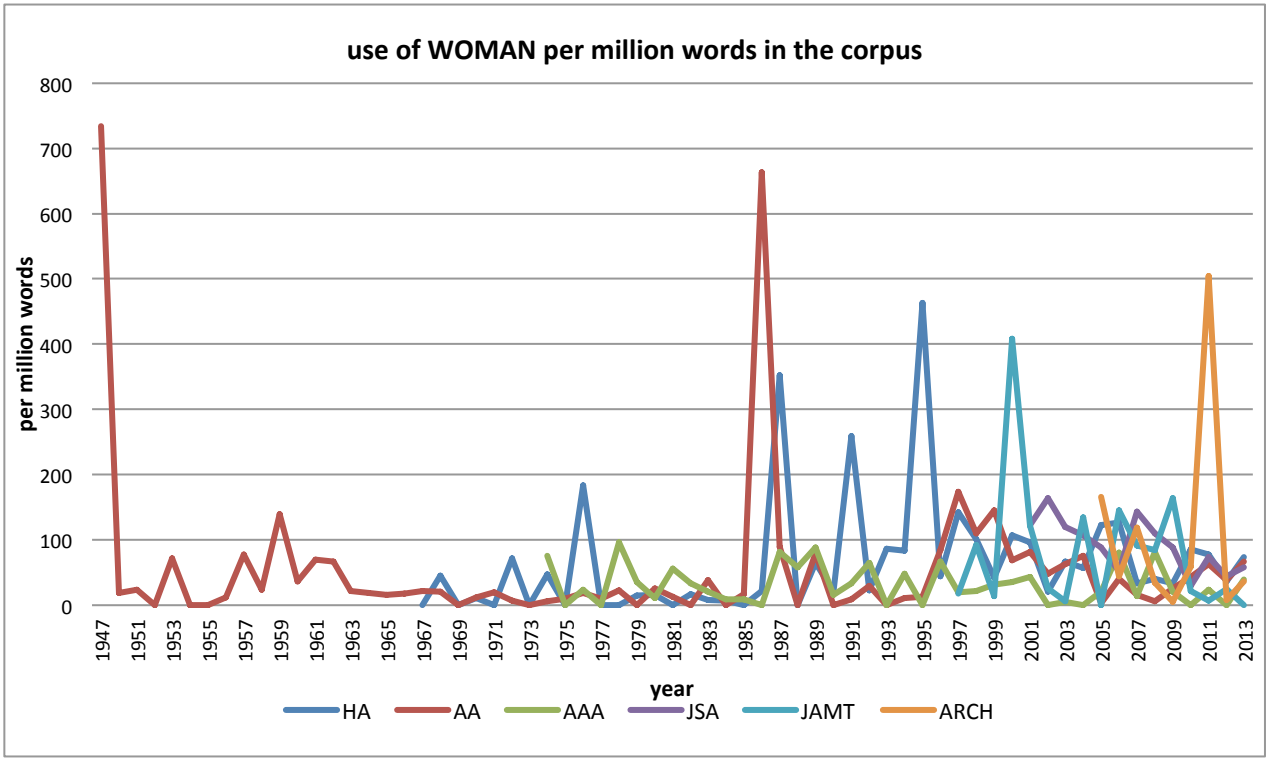

Figure 17: Use of the word WOMAN (pmw) in the corpus

There were three major peaks in the use of WOMAN in AA: the first in the inaugural issue in 1947 (733 pmw), followed by a second in 1986 (663 pmw). Both WOMAN and MAN scored highly in 1986, a result of volume 2 (2), particularly Guy Prentice's paper 'Analysis of the symbolism expressed by the Birger figurine', which concerns a 'goddess' figurine found at Cahokia. There were two minor humps between 1950 and 1963, and 1996 and 2004 (results of between 50 pmw and 150 pmw). The results across time range from 0 to 20 pmw.

The results for HA are also characterised by peaks and troughs, with 183 pmw in 1976, 352 pmw in 1987, 259 in 1991 and an overall peak of 463 pmw in 1995. The main clustering of WOMAN occurs in the 1990s. Prior to this, most results are in the bottom range between 0-50 pmw, and after the 1990s there is a consistently increased use of WOMAN of between 20 to 100 pmw. AAA has the most marked difference, with results

for WOMAN consistently lower across the timeframe compared to MAN. The highest count was 96 pmw in 1978, followed by 88 pmw in 1989, which is close to the lowest count of 50 for MAN in AAA. Scores of zero occurred in each decade, and as recently as 2010 and 2012.

In the more recently established journals, JSA had regularly higher scores than both ARCH and JAMT. There are less dramatic peaks, with a high score of 164 pmw in 2002 and around the 100 pmw band across the period, and with the lowest result of 29 pmw in 2010. JAMT's results fluctuate much more, with the highest score of 408 pmw in 2000 and zero in 2005 and 2013. Most results cluster between 10 and 80 pmw. ARCH had 503 pmw in 2005, which again was inconsistent when compared with the results from other issues, which ranged from 5 pmw in 2009 and 7 pmw in 2012 to 166 pmw in 2005. All scores for WOMAN were lower than MAN in all journals. In comparing the binomial pairs MAN and WOMAN, MAN occurred most frequently in AAA and HA, and WOMAN most frequently in AA and ARCH.

7.2.7 Male

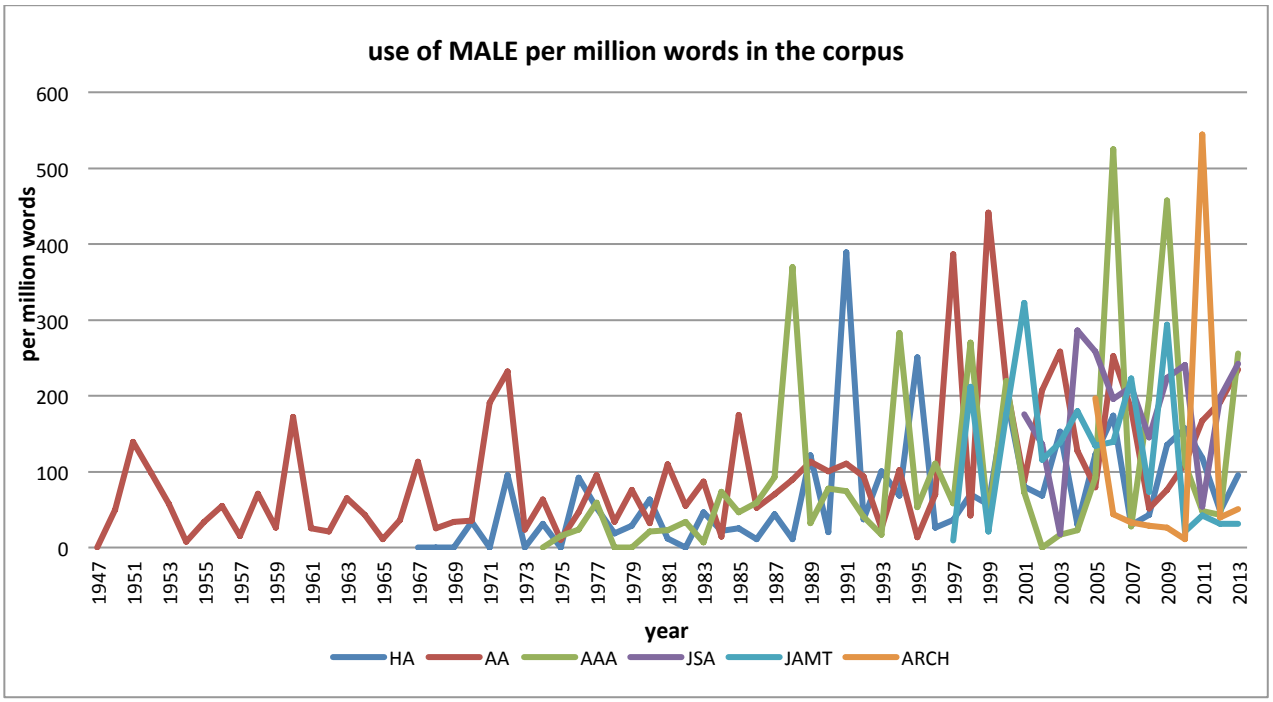

Figure 18: Use of the word MALE (pmw) in the corpus

Unlike MAN, which can be used as a noun and generically to refer to humans, MALE only refers to men and/or the masculine. The results can thus further be examined in terms of activities (e.g. 'male ritual'), and its use as a noun (e.g. 'human male') or an adjective (e.g. 'male sex'). The frequency rates across the journals show an overall increase after 2000 in all uses of the word, although these are not completely in tandem with FEMALE, as discussed below.

In AA there are two main peaks: one in 1997 (386 pmw) and another in 1999 (441 pmw), which was the highest frequency for MALE in AA. These peaks are a result of the article and discussion on the Sidney burial by Brooks Lovvorn et al. For AA, overall results for MALE lie between 55-100 pmw, with small peaks around 200 pmw in 1951, 1960, 1972 and 2003. The overall frequency remains higher after 1997, when it consistently appears more often. The overall frequency for MALE in HA was low (10-20 pmw) until a spike of 388 pmw in 1991; this journal's highest result. MALE occurs less often in HA than the other five journals, with seven years of null results between 1967 and 1983. There is an overall upward trend after 2000, with small peaks of 199 pmw in 2000, 174 pmw in 2006 and 156 pmw in 2010.

AAA shows similar trends to HA, with null values occurring in the 1970s and very small increases through the 1980s, until a peak of 369 pmw in 1988, then a decline and small peak again of 269 pmw in 1998. The highest score was 524 pmw in 2006, due to the paper by Smith and Burke, 'Glass ceilings, glass parasols and Australian academic archaeology'. This is close to the highest frequency for MALE of 544 pmw in ARCH in 2011. This peak in ARCH is an outlier, however, as across the time period examined all other results for this journal are under 50 pmw, with the exception of 196 pmw in 2005. JAMT follows a similar pattern, but with large fluctuations in results. In Figure 18, for example, when the journal began in 1997 MALE appeared at a rate of 9 pmw, followed by 212 the next year, and then 21. There is an overall increase after 2000, with results in the 100s (pmw) and a peak of 322 in 2001, but then an overall decline in the 2010s. JSA's results differ, as they are consistently in the 150-250 pmw band, and indicate that, overall, MALE is utilised more often and more regularly in JSA.

7.2.8 Female

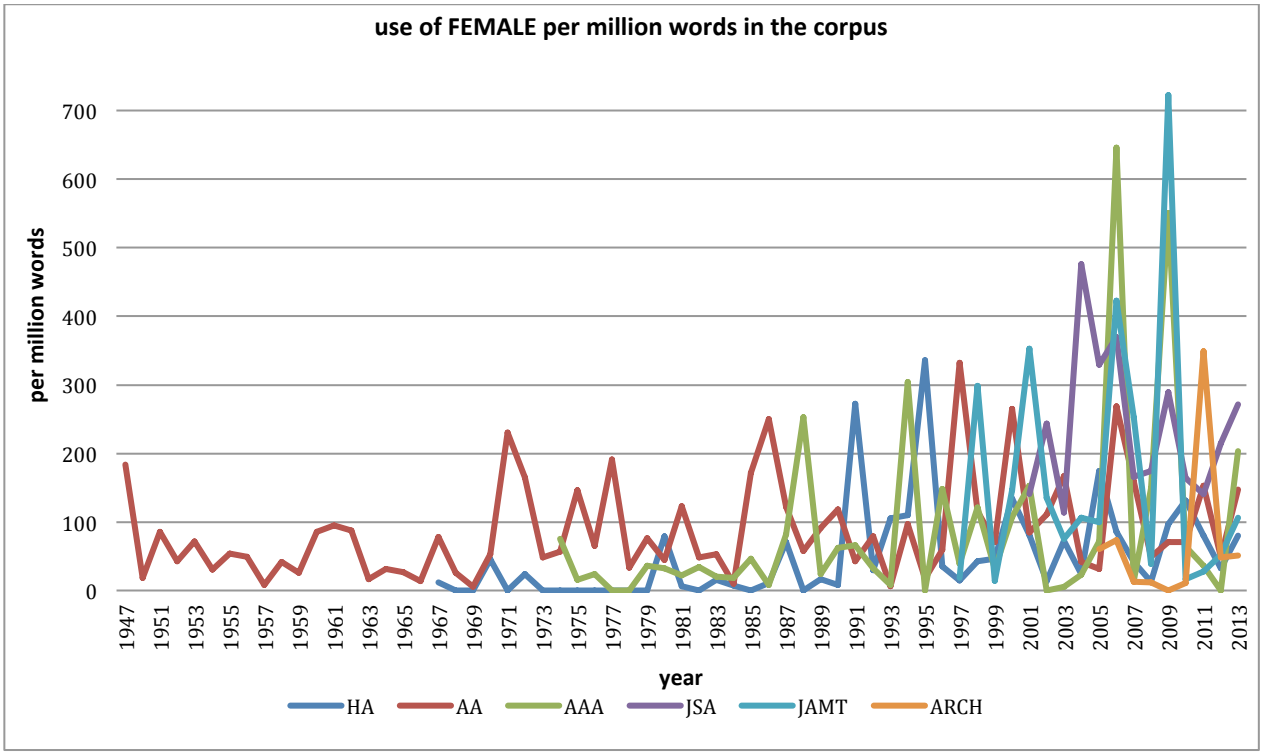

Figure 19: Use of the word FEMALE (pmw) in the corpus

There is a subtle but important difference between the variations of FEMALE, WOMEN and WOMAN. The word FEMALE describes a noun or clarifies it, whereas WOMAN and WOMEN can only be nouns. Lakoff (2000) explained the female-woman distinction in terms of occupation, where the use of either woman or female with terms such as 'president, speaker, doctor, professor' suggests that a woman holding that position is marked, in some way unnatural, 'so we never say 'male doctor', still less 'man doctor''(Lakoff 2000:45). The English language, specifically, has been shaped for centuries through patriarchal influences that normalise a default-male perspective, leading to any adjectival use of female or woman as indicating something exceptional. For example, it is unusual to say 'a male archaeologist', but it is not extraordinary to say 'a female archaeologist'. In addition to denoting the sex of a practitioner, female is used in archaeological literature to denote sex in contexts such as 'female skeleton' or even 'female artefacts'.

Overall the results do not demonstrate a clear upward or downward trend in the use of FEMALE—rather a series of peaks and troughs. AA's results in Figure 19 show a marginal increase from 1947 to 2013, with most falling below the 50 pmw mark pre-1980, and just above this rate post-1980. There are a few minor peaks, the first in 1947 (183 pmw), then in 1971 (230 pmw), and in 1986 (250 pmw). The highest result for FEMALE in AA was 331 pmw in 1997.

HA recorded most of the null values and some of the lowest scores for FEMALE in the corpus, usually appearing less than five times per issue from 1967 to 1997. The highest result for FEMALE was 335 pmw in 1995, followed by 272 pmw in 1991. The word appears each year after 1995, peaking at 174 pmw in 2005, and with a low of 12 pmw in 1998.

For most years, AAA's results lie in the 20-35 pmw range, with an upwards shift starting in the 2000s. In 2006 there was a high of 646 pmw, falling to 550 in 2009 and 203 in 2013. Prior to this there were anomalies, with 252 pmw in 1988 and 304 pmw in 1994. In contrast, the JSA results are, on average, around 230 pmw, with a peak of 476 in 2004. JAMT's results are a series of peaks and troughs, for example, 18 pmw in 1997 then 298 pmw in 1998, with a high score of 722 pmw in 2009.

Binomial pair: male-female

It was hypothesised that the keyword FEMALE would occur with MALE, in line with the overall frequency rate (Table 6: MALE (739 pmw) to FEMALE (742 pmw)). It was also thought MALE and FEMALE would occur at similar rates, because they would be mentioned together in the same sentence, and according to the preferred order of English binomial expressions for gendered categories of humans (Baker 2014). The average score per million words across each journal was calculated for each of the key words FEMALE and MALE. In four of the six journals, MALE scored a higher result. In comparing the journals, MALE occurred most frequently in ARCH and then AAA and AA, with FEMALE occurring most often in JAMT and then AAA.

7.2.9 Men

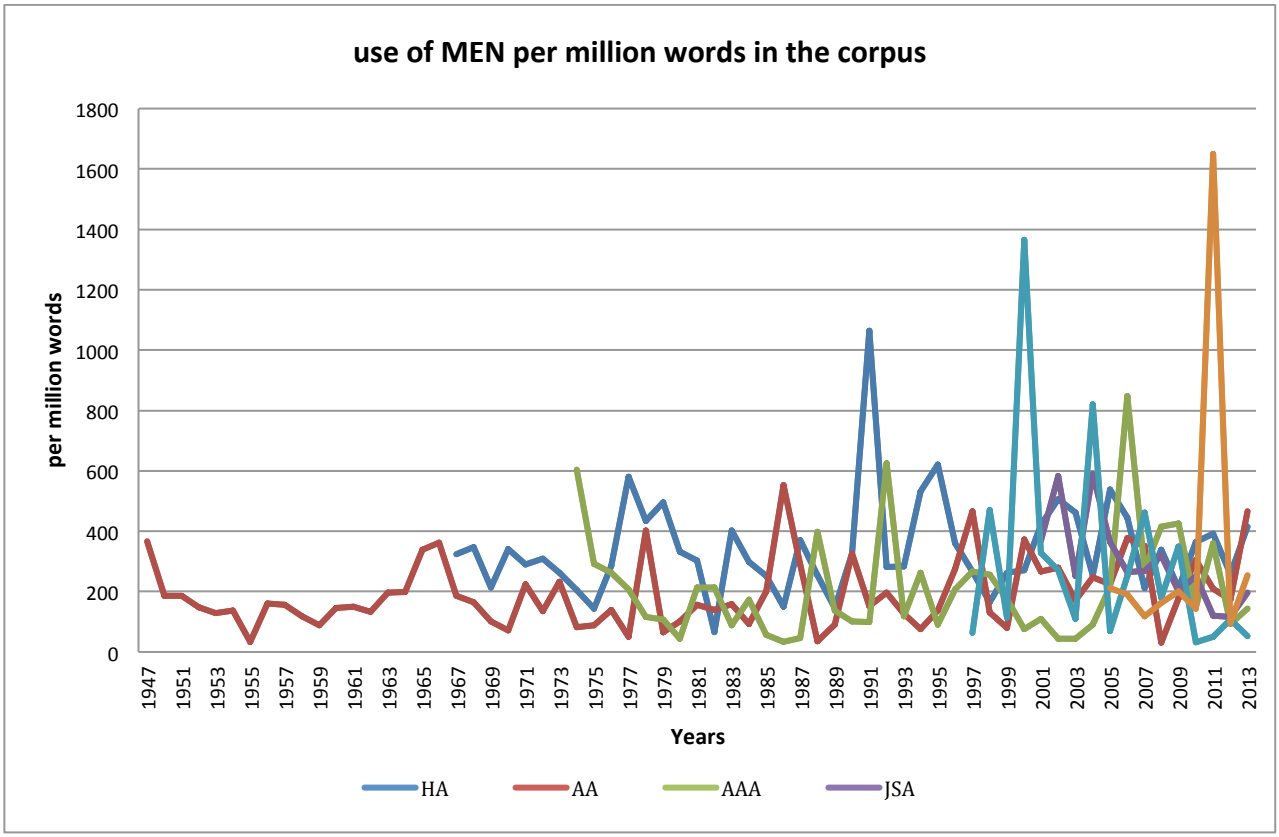

Figure 20: Use of the word MEN (pmw) in the corpus

The word MEN was also analysed, as it may be used in the same way as MAN, but may also indicate the specific study of masculinities. The overall results in Figure 20 show a slightly right-skewed distribution of results post 1990. AA's results pre-1995 are mostly within the lowest range, at less than 200 pmw, with a peak of 556 pmw in 1986. After 1995 most results lie within the 200-400 pmw ranges, confirming a slight overall increase in use of MEN over time. For HA the results differ, as the distribution is much more symmetrical, with a large peak in 1991 of 1063 pmw; either side of this peak results lie mostly in the 200-400 pmw range, with some clustering in the 400-600 pmw band between 1977-1980, 1994-1996, and 2001-2005. Figure 20 shows that the most fluctuating results are in AAA. Although most scores are in the 100-400 pmw band, there are large peaks and troughs. A small peak of 624 pmw in 1992 was followed by a significant downward trend between 1994 and 2006. In 2006 the results peak at 848

pmw, then remain consistently between 200-500 pmw until 2013. The more recently established journals, JSA and JAMT, each have a major peak and then decline between 2010 and 2013. For JAMT the peak of 1365 occurred in 2000, with most results in the 200-400 pmw band, dropping to fewer than 100 pmw after 2010. JSA similarly had high results in the early 2000s, including over 500 pmw in 2002 and 2004 dropping to between 200 and 300 pmw until 2010, when the results drop below 200 pmw between 2010 and 2013. ARCH had one large peak of 1649 pmw in 2011, but with all other results consistently at around 200 pmw in each volume.

7.2.10 Women

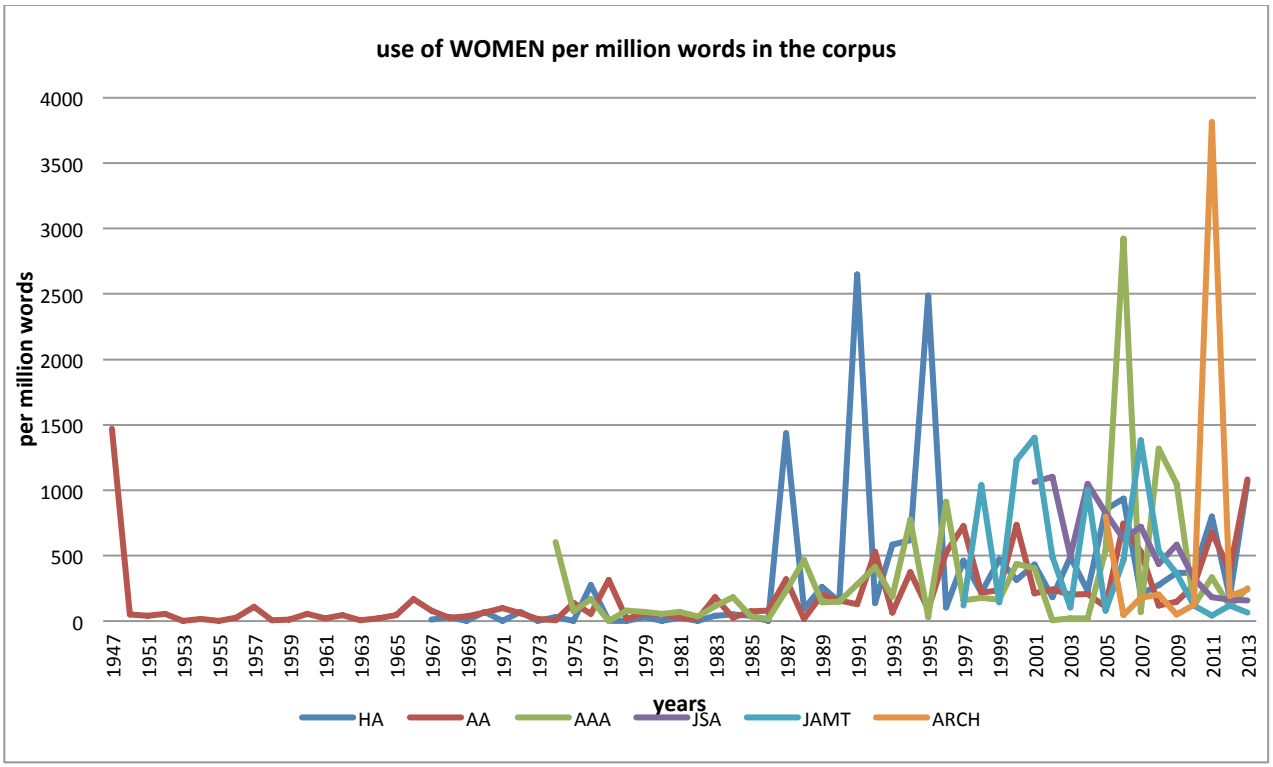

Figure 21: Use of the word WOMEN (pmw) in the corpus

Like FEMALE, the word WOMEN may be used to describe research subjects as well as archaeological practitioners. As the binomial pair to MEN, WOMEN is also a plural and denotes one or more adult females. But, unlike MEN, in present-day English the semantic derogation of female gender-related terms is also noticeable in the most basic word pairs relating to adult humans: man–woman, and men—women. Romaine

(1999:125) observes that 'women' is used comparatively infrequently when addressing or, especially, referring to adult females, at least as compared with the use of men to refer to adult males. She argues that there is a broad reluctance to use the simple terms woman, or women, which 'according to some men [are] too blunt, too overtly sexual, too demeaning, or too common' (Romaine 1999:125). Hence, instead of referring to and addressing adult females as women, in everyday English language, until at least the late 1990s, the words 'ladies' or 'girls' are—ironically—an attempt to avoid the seemingly negative connotations of 'women'.

The data in Figure 21 (and in the collocation data for each journal later in this chapter) elucidates whether there has been an uptake of or increase in use of the word WOMEN in the corpus. Overall, the frequency results were higher than the results for the binomial pair word MEN. It was hypothesized that the use of the word WOMEN would increase, as words such as 'ladies' and 'females' become less popular in light of Romaine's observations. This upward trend, however, is not reflected across all journals. In AA the highest results occurred in the first and last year of the data set, with 1467 pmw in 1947 and 1083 pmw in 2013, although both can be seen as outliers. Figure 21 shows that, from 1948 until 1992, the rates of WOMEN were in the lowest band, with most results less than 50 pmw. There was then a peak in 1992 of 528 pmw, followed by 523 pmw in 1996. After this the results were consistently higher, ranging from 200 to 700 pmw. In HA there was a first peak of 1435 pmw in 1987. Prior to this there were nine years of null values, and, like AA, rates of below 100 pmw in most years prior to this date. There were then two large increases to 2649 in 1991 and 2489 in 1995. The early 1990s saw the highest numbers in HA, but from this time there is a consistently higher rate until 2013.

The results for AAA vacillate greatly over time. The journal commenced with a high result for WOMEN of 603 pmw in 1974, then declined to about 50 pmw through the rest of the 1970s and into the 1980s. In the 1990s this rose slightly to the 100-250 band, reaching 773 pmw in 1994 and 909 pmw in 1996. There is a cluster of high results in

2006, 2008 and 2009, with 2921 in 2006 somewhat of an outlier. In the 2000s, results vary from 5 to 22 pmw in 2002, 2003 and 2004, but rise again to 1318 pmw in 2008 and 1049 pmw in 2009 before dropping, indicating erratic use. The results for JSA show a clear, persistent decline in use in every volume after 2002, from 1063 pmw in 2001 and 1102 pmw in 2002, down to 156 pmw in 2013.

The JAMT has similar variability, with very high and very low results over a short timeframe. There is a high point of 1400 pmw in 2001, followed by 998 pmw in 2004 and 1382 in 2007, then a decline to under 150 pmw in all other years to 2013. ARCH has two peaks:801 pmw in 2005 and 3811 pmw in 2011. In all other years, the use of WOMEN falls below 200 pmw. In comparing these binomial pair words, MEN occurs most frequently in ARCH and then JAMT and HA, with WOMEN occurring most often in ARCH and then AAA and HA.

7.2.11 People

Another way of considering the extent of gender bias is to think about alternative terms that do not mark gender and which could have been used in place of man or woman. In recent years, the encouragement of gender-neutral language has led to a change in pronoun usage. For example, when gender is not known, 'he' was the traditionally chosen pronoun, even though she, they or them were always available as alternatives (Twenge et al. 2012). Similarly, possible alternative terms for 'mankind' or 'man' would be PEOPLE or HUMAN. PEOPLE was therefore included as a keyword in this analysis as a way to identify a change in language use. For example, if the word PEOPLE is used more often, at the same time that a word such as MAN decreases, then it is possible to infer a shift in language. The term PEOPLE is thus a gauge of transformation away from binary gender and towards neutrality, but also an indicator of socially focused discussion in the corpus. Motschenbacher (2012:12) notes that 'it is challenging to talk and think about a person not as a female or male person, simply because binary gender is a dominant discourse that structures our ways of constructing people.' These results also aid in answering the broader research question–is there evidence that language use has become less sexist or more inclusive in terms of gender representation over time?

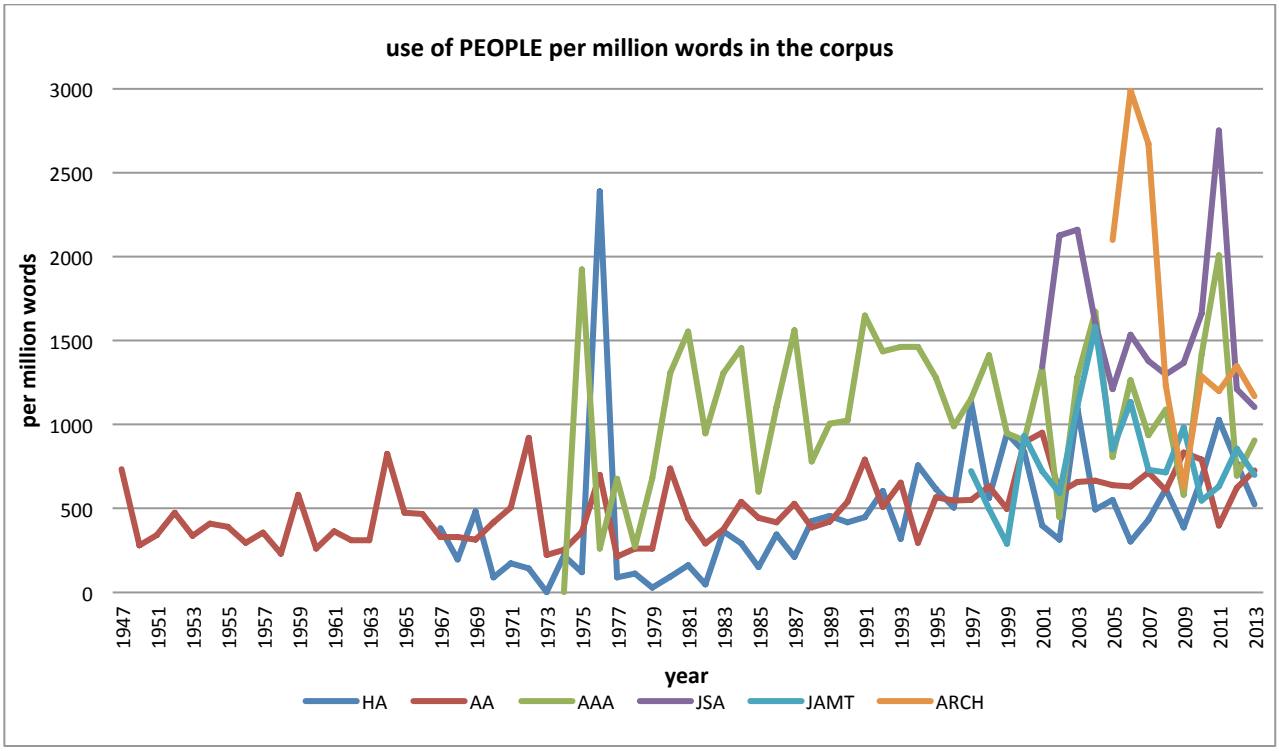

Figure 22: Use of the word PEOPLE (pmw) in the corpus

The use of PEOPLE in AA shows a steady increase over time (Figure 22). In the period from 1947 until 1990 most results are in the range of 220 to 500 pmw (but with four years in this period achieving higher results of 701, 739 and 824, 922 pmw). The lowest result for PEOPLE in AA was 229 pmw in 1958. After 1990, all results are above 296 pmw, with a peak of 950 in 2001. In HA, the peak use for PEOPLE occurred much earlier, in 1976, with 2389 pmw, but this is an anomaly due to a low total word count in this volume. HA also scored the lowest result for PEOPLE across all journals, with lower scores than both AA and AAA throughout the 1960s, 1970s and 1980s. Frequency increased after 1992, with an overall upward trend between 350 and 750 pmw until 2013 and an average overall use of around 450 pmw.

For AAA, results are consistently in the range of 1000 to 1500 pmw across the time frame examined. There are exceptions in the 1970s, when the lowest rates for PEOPLE are evident, with scores of 0 in 1974, 262 pmw in 1976 and 270 pmw in 1978. There are

also scores of 1923 pmw in 1975, 1651 pmw in 1991, 1671 pmw in 2004 and 2006 pmw in 2012, which reflect an overall increase in word usage after the 1990s. Overall, the results are higher than those for HA and AA.

JSA has a similar average to AAA of around 1500 pmw from 2001 to 2013, with a high of 2752 pmw in 2011 and a low of 1103 in 2013. Overall, the results are consistently high. The JAMT has a peak of 1582 pmw in 2004, with results having a normal distribution of around 800 pmw either side of this date. The data for ARCH can be seen as having two groupings: the first between 2005 and 2007 when PEOPLE scored over 2000 pmw, (including the highest score for PEOPLE across all journals of 2993 pmw in 2006) and the second around 1100 pmw for all other results to 2013. PEOPLE scored the highest results in ARCH and JSA.

7.2.12 Human

There are subtle yet deep-seated distinctions between the words HUMAN and PEOPLE in the English language. A HUMAN is described as part of the *Homo sapiens sapiens* species. The term PEOPLE, on the other hand, refers to beings that have the capability of conscious thought, i.e. are sentient (McHugh 1992). PEOPLE are thus the group who possess 'personhood' (see Fowler 2004:7-9 for further definition), and so, historically, religiously and legally, PEOPLE has been a debated term. It is important in the context of this thesis to note that 'personhood' and the notion of being part of the group 'people', and even 'human' was denied to many non-Europeans and women until the 19th century, with many Indigenous groups being racialised as inferior and conceptualised as less than human. As Nelson Maldonado-Torres (quoted in Grosfoguel 2013:81) said:

> To refer to the indigenous as subjects without religion *removes them from the category of the human*. Religion is universal among humans, but the alleged lack of it among natives is not initially taken to indicate the falseness of this statement, but rather the opposite, that there exist subjects in the world who are *not fully human*. [my emphasis]

As argued by Grosfoguel (2013), for many colonising societies throughout the 15th to 19th centuries, this attitude turned those without (usually Christian) religion into non-humans and non-people, justified invasion, slavery, the organising principles of the division of labor, and capitalism. It is also this epistemic racism/sexism around the concepts of 'human' and 'people' that are foundational to the knowledge structures of the Westernised University (Grosfoguel 2013:90).

In this context it was hypothesised that the word PEOPLE is likely to be used in archaeology to describe social/cognizant/contemporary/European *Homo sapiens* rather than the genus Homo. The use of HUMAN may often be in the context of non-humans and early humans, and more recently with the concept of 'human rights'. The use of HUMAN, like PEOPLE, may also denote a shift towards gender-neutral language and a move away from words such as 'mankind'.

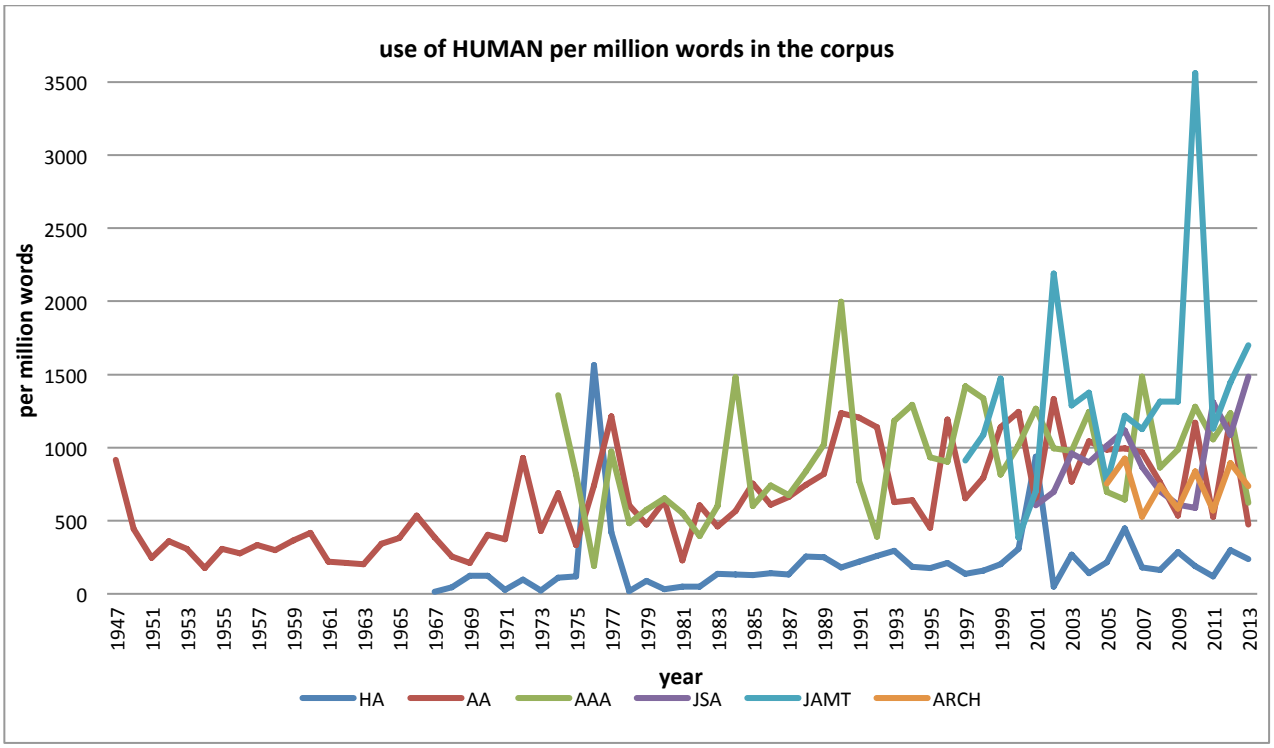

Figure 23: Use of the word HUMAN (pmw) in the corpus

The results for AA show a definite right-skew for HUMAN, and thus increased use over time (Figure 23). There are three main discernible patterns. The first is from 1948 until 1970, when most results fall in the 200 to 400 pmw band, with the lowest score of 174 pmw in 1954. The second pattern can be seen from 1971-1990, where there is an increase in most scores to around 600 to 800 pmw, with two peaks of 1213 pmw in 1977 and 1237 pmw in 1990. From 1990 to 2013 there is an increase, with results over 500 pmw or 1000 pmw, and a high score of 1331 pmw in 2002. Taken as a whole, the results show that, after 1970, there is a higher rate (pmw) of the word HUMAN in AA than PEOPLE. Figure 23 shows the lowest results for HUMAN were in HA. There was one large peak in 1976 of 1562 pmw when HUMAN was mentioned 17 times, but as the volume has a lower number of words (or tokens) the pmw count is higher and this is therefore an outlier. Most results for the early years of the journal fall in the range of 150 to 250 pmw, with a slight shift after 1988 to the 250 to 450 pmw band, and a peak of 939 pmw in 2001, attributable to the volume having a focus on forensic archaeology. These are similar to the results for PEOPLE.

AAA has a relatively high frequency rate, showing results in the range of 500 to 1000 pmw from 1974 to 1989 and then an increase to 1000 to 1500 pmw from 1990 to 2013. There was a peak of 1996 pmw in 1990 and a low of 191 pmw in 1976. The JSA also has consistent use of the word HUMAN, which increases incrementally over time. In the early 2000s scores were around 600 to 800 pmw, but then rose to 1309 pmw in 2011 and 1485 pmw in 2013.

The JAMT has the highest rates of use for HUMAN, with the results also showing a slight increase over time. The average scores are around 1300 pmw, with one large peak of 3560 pmw in 2010, the highest score across all journals, followed by the second highest of 2189 pmw in 2002. The score of 3560 pmw in 2010 can be attributed to papers such as Holliday and Lawrence-Zuniga's 'Prologue to uses of chemical residues to make statements about human activities' in a special issue. The results for ARCH were consistent, with all scores over 500 pmw and a peak of 924 pmw in 2006. Overall,

HUMAN scored the highest results in the journals JAMT and AAA, whereas PEOPLE scored highest in ARCH and the JSA, which may reflect a scientific/social difference in use and the journals' foci.

7.2.13 Family

As outlined in 4.8, FAMILY was included as a keyword as it is a location of biologically and legally defined relationships between men and women, adults and children, but also can be where private and public spheres intersect. FAMILY, consequently, may indicate discussions around household composition, the life course, gender, class, race, power and generational relations, kinship, sexuality and varied forms of domesticity. Although regularly classified as a natural or biological unit, like gender, the family is also very much a social construction, and the concept of a 'nuclear' family is very much a recent concept (see Ingoldsby 2006:67).

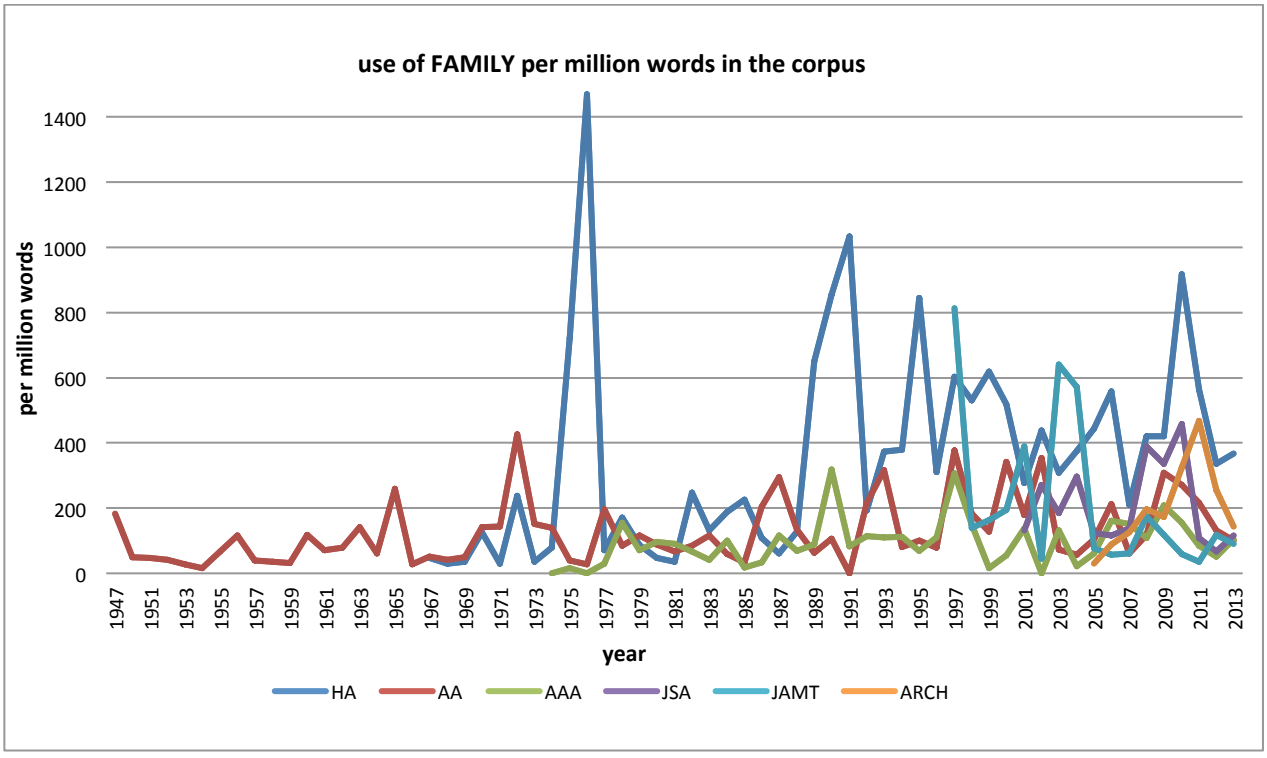

Figure 24: Use of the word FAMILY (pmw) in the corpus

AA has on average, some of the lowest results for FAMILY, of around 100 pmw prior to 1991 (and a null value recorded in this year), but with a peak of 427 pmw in 1972. After 1991 results rise to around 150 pmw (Figure 24), and there are consistently more

volumes with results over 150 pmw in the 2000s, indicating increasing discussion over time. HA, in contrast, has the highest result for FAMILY in the corpus, with results of 1470 pmw in 1976, 1032 pmw in 1991 and 917 pmw in 2010. There was a decline from 1978 to 1988, though these results are on par with AA and AAA in this decade, and a steady increase to the range of 400-600 pmw after 1991. AAA's results overall were the lowest for FAMILY, with most being under 100 pmw and null scores in three years. There are small peaks of 318 pmw in 1990 and 306 pmw in 1997, but these are well below the scores for HA. Unlike AA and HA, there is no increase in use over time.

The JAMT had varying results: there are three high scores of 812 pmw in 1997, 640 pmw in 2003, and 572 pmw in 2004. In most other years scores are around 200 pmw down to a low of 35 pmw in 2011. Similarly, JSA and ARCH both had averages around 200 pmw. These journals' results mirror each other: JSA had a peak of 457 pmw in 2010 and ARCH 467 pmw in 2011, but the low for JSA was 66 pmw in 2012, whereas ARCH had only 30 pmw in 2005.

7.2.14 Children

CHILDREN was included as a marker of relational identification. Van Leeuwen (1996:54–55) notes that one way that social actors can be identified is through relational identification, which involves making reference to someone in terms of their relationship to someone else, for example mother, friend, or husband. CHILDREN could also be linked to the use of other words, for example to find out if children and women, or children and men occurred together.

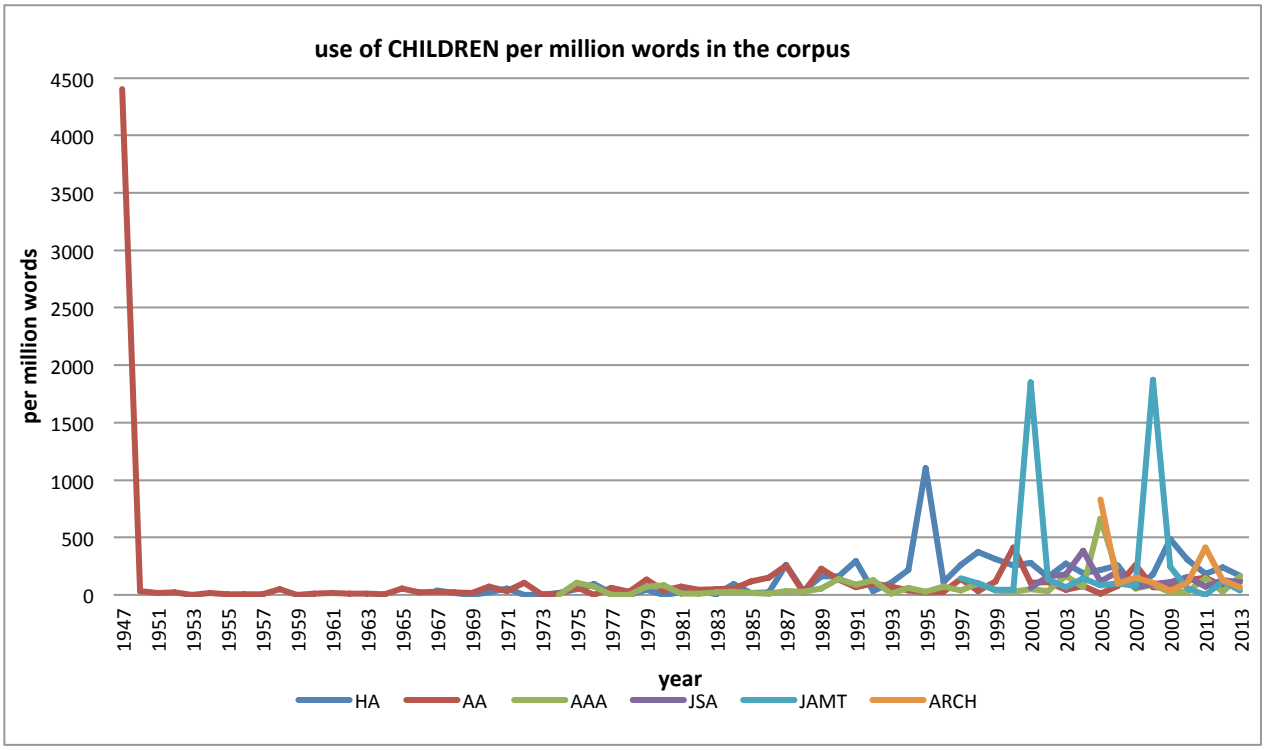

Figure 25: Use of the word CHILDREN (pmw) in the corpus

The overall results are characterised by one outlier: a score of 4402 pmw in the 1947 volume of AA. Clearly, this is atypical of the corpus, which, as shown in Figure 25, has very low results for CHILDREN in all journals. The result of 4402 pmw is attributed to three articles in that year: Robert H. Lister's 'Additional evidence of wheeled toys in Mexico', Adelaide Kendall Bullen's 'Archaeological theory and anthropological fact', and 'The interrelation of population, food supply, and building in pre-Conquest Central Mexico' by S.F.Cook. The rates for CHILDREN in AA are otherwise very minimal (under 20 pmw) until the 1970s, when there is a slight increase to around 50 pmw until 2013. It was expected that HA would have a relatively high rate of usage for CHILDREN given the results for FAMILY. However, there were five years with no result to 1980 and the peak was 1104 pmw in 1995, followed by 378 pmw in 1998. Overall, the results for CHILDREN are marginal until the mid 1990s, when there is a consistent and increased use of around 200 pmw.

AAA's results are distinguished by one peak of 664 pmw in 2005, with all other results being less than 50 pmw. This peak is attributed to a special issue (volume 60) on teaching archaeology to school children. Most results for JSA are in the 100-150 pmw range, with one peak of 387 pmw in 2004. The JAMT has two large peaks: the first of 1851 pmw in 2001 and then 1872 pmw in 2008. All other results are below 200 pmw. The first is due to Katherine Kamp's 'Where have all the children gone? the archaeology of childhood' and in 2008 'Playing with flint: tracing a child's imitation of adult work in a lithic assemblage' by Anders Högberg, as well as 'The bioarchaeological investigation of childhood and social age: problems and prospects' by Siân Halcrow and Nancy Tayles. ARCH begins and peaks with 831 pmw in 2005, with most results under 150 pmw apart from one minor increase to 410 pmw in 2011.

7.3 Results in context: comparisons, collocates and concordances

'You shall know a word by the company it keeps.' J. R. Firth (1957:161)

Collocation is the discernible regular, statistical co-occurrence of words that can be expressed quantitatively (Fellbaum 2007:8) (see Chapter 5). The results were sorted using their Mutual Information (MI) score, an effect size statistic which measures the strength of association between two words (Baker and Levon 2015:225). An MI score higher than three is considered significant in corpus linguistics (Hunston 2002), and therefore adjectives with an MI score below three have not been included in this chapter (but see Appendices 2 to 8 for all collocation results). Kilgarriff and Tugwell (2002) proposed a measure for selecting relevant collocates which, for lexicographic purposes, they called salience. Salience is the product of MI and log frequency, and has been used in this study. The collocations with highest MI scores, combined with frequency rates of greater than three, were tabulated in descending order for each search term. It should be noted that, for the purposes of this research, only the grammatical categories of nouns, verbs and adjectives are considered in order to focus on the lexical, meaning-denoting and functional elements of language, rather than other grammatical items such as articles, auxiliary verbs, pronouns, etc. Grammatical words such as *of, a,* and *the* will always be the highest frequency words in any text, as their

main role is to provide cohesion and coherence (Scott and Tribble 2006). Singular and plural words were considered separately, so, for example, collocations of both the phrases 'gender archaeology' and 'archaeologies *of* gender' elicited two separate results. The collocation tables in Appendices 2 to 8 show all occurrences of a word, phrase or related pair of words in the immediate context of their occurrence, their frequency and whether they occurred to the left or right of the keyword.

For keywords such as HUMAN and MAN, this process resulted in tens of collocations for each word, although for other words in some years there were no results at all, or a word frequency that was fewer than three (i.e. the word occurred once in a year so the collocate was of no statistical significance). The tables in this chapter show only the five most significant collocations for each keyword. This is simply so they can be grouped together in order to indicate discourse prosodies, that is, where a keyword is frequently associated with a set of words that references the same discourse. For some of the more salient terms concordance lines were also scrutinised. For the most frequent collocations, concordances representative of the results are included.

The use of the tools of collocation and concordance in this chapter aim to provide an overview of the semantic shifts that a number of gender-related terms have undergone across archaeology. Some of the gender-related terms included in the present study have been subject to changes in meaning to various degrees since the 1950s. Therefore, it is important to bear in mind that the connotations these terms carry in the present are not necessarily the same as those when the earliest material examined here was produced. The results of this study form the background to the subsequent analysis, to show how gender has been used in archaeology over time.

7.4 Results for *American Antiquity*

The Society of American Archaeology (SAA) launched the peer-reviewed journal *American Antiquity* in 1935. As noted by Sterud (1978:294), it became the flagship journal of American anthropologically based archaeology. Its content is primarily around the archaeology of the 'New World', archaeological method and science, and pre-

Columbian societies or civilizations. As such, any changes in and around gender theory should be reflected in its content, and are likely to be indicative of wider trends in North American archaeological thought. Research articles from 1947 through 2013 (a total of 1505 articles and 13,325,580 words) serve as the corpus in this section (see Appendix 2 sheet 1). Issues from 1935 to 1946 were excluded as these pre-date theories of social gender.

7.4.1 The use of GENDER in AA

One way to track changes is to examine the uptake and use of a word after its introduction into wider social commentary and see if it replaces or supersedes other words. In this case the words GENDER and SEX are tracked. As AA has sound longitudinal data, it is possible to examine the results for GENDER and SEX in relation to one another. Figure 26 demonstrates a major and consistent increase in the use of GENDER after 1992, although it has never superseded or become a substitute for the word SEX. SEX and GENDER do occur at the same time, with multiple and overlapping uses.

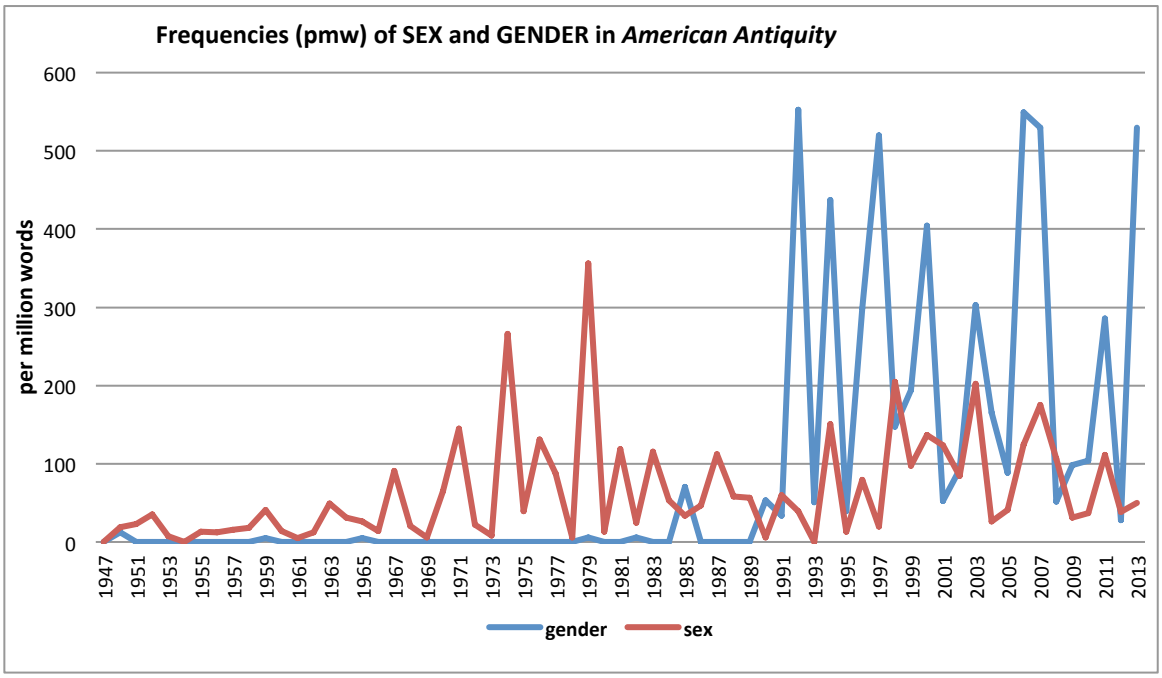

Figure 26: The proportional frequencies of sex and gender in *American Antiquity*

The word SEX increased incrementally over the 66 year period, with several peaks, particularly in the 1970s. Its overall frequency is less than GENDER, but the word SEX is used more often, and in more issues. So, while GENDER has a higher total (attributed to more peaks caused by special issues or articles), SEX is used more often overall. From 1992 to 2013 the average frequency of GENDER is around 250 pmw, compared to SEX, which is approximately 85 pmw.

In order to obtain a more nuanced understanding of the way GENDER is used, the collocations for GENDER were compiled. In other words, GENDER might appear 300 times in 2003, but the context of discussion may be about, for example, how gender is irrelevant to archaeology. The collocations have thus been harvested from the data to determine the nature of discussion around gender. So the words 'gender' and 'irrelevant' are also considered here as collocations. In Table 6, each column of the table shows the top five collocations of GENDER by year and the frequency of their occurrence. Only the years where the there was a statistically significant MI and frequency scores were included. For example, in Table 6, GENDER has significant collocations in 1985, and not in any prior years. WOMEN appears in column three for 1992, with the number fifteen in brackets (15). This means that the word WOMEN is the third highest collocation of the node word (GENDER) based on the MI score[2] and frequency in that year, and that the two words co-occur fifteen times.

Table 6: Top five collocations of GENDER in AA, according to MI-score and frequency by year

Gender	1	2	3	4	5
1985	archaeological(9)	archaeology (5)	gender(4)	research (3)	relations (3)
1990	age (7)	percent (3)	-	-	-
1992	archaeological (21)	research (20)	women (15)	archaeology (15)	Wylie (11)
1993	archaeology (3)	-	-	-	-
1994	research (19)	archaeological (17)	archaeology (12)	recent (8)	interests (7)
1995	archaeology (11)	archaeological(8)	research(7)	edited(7)	labor (6)

[2] The AntConc collocation analysis tool (Anthony 2012) was used to find the keyword's collocates. AntConc outputs collocates alongside a probability value assessing the significance of the frequency of co-occurrence of two lexical items. This measure is the Mutual Information (MI) score, the strength of association between two words (Blaxter 2014).

1997	space (14)	ethno-archaeological (14)	subsistence(13)	pottery(10)	roles(8)
1998	roles(4)	female(3)	based(3)	archaeology(3)	American(3)
1999	early(10)	cultivation(9)	antiquity(7)	age(7)	percent(6)
2000	sex(20)	individuals(17)	masculine(13)	culture(8)	traits(8)
2001	study(3)	archaeology(3)	archaeological(3)	antiquity(3)	-
2002	fitness(5)	work(4)	differentiated (3)	based (3)	-
2003	archaeology(24)	archaeological (10)	research(9)	studies(8)	prehistory(7)
2004	roles(8)	social(6)	construction(6)	class(6)	landscape(6)
2005	work(5)	American(4)	subsistence(3)	groups(3)	differentiated(3)
2006	VanPool (26)	grandes(15)	societies(13)	range(12)	middle(12)
2007	archaeology(36)	imbalance(25)	imbalanced (21)	warfare(15)	Grasshopper (11)
2008	status(5)	archaeology(3)	-	-	-
2009	roles(4)	ritual(4)	hunting(4)	class(4)	studies(4)
2010	social(4)	age(4)	status(3)	specific(3)	relationships (3)
2011	identity(8)	social(7)	production(6)	ethnicity(6)	archaeology(6)
2013	archaeology(20)	roles(17)	bias(14)	relations(14)	women(11)

In order to analyse themes from the results for collocations, elements of Van Leeuwen‘s (1996) scheme for the classification of social actors was applied. Van Leeuwen’s scheme distinguishes three major categories. One is ‘functionalization’, defining people’s identity ‘in terms of an activity, in terms of something [people] do, for instance an occupation or role’ (Van Leeuwen 1996:54). The second is ‘identification’, categorizing people more or less as who they are (Van Leeuwen 1996:54). Within ‘identification’ there are also ‘classification’, ‘relational identification’ and ‘physical identification’. ‘Classification’ includes age, gender, provenance, class, ethnicity, sexual orientation and so on. ‘Relational identification’ incorporates relationships such as kinship, family and friendship, and ‘physical identification’ is concerned with physical characteristics. The third category, ‘appraisement’, has to do with the ways social actors are evaluated in discourse. Rather than trying to ‘fit’ the results for this study into this theoretical model, the results have driven additional category groupings and subheadings for classification.

This is also because the nature of archaeological literature itself is unique, and its subjects do not fall neatly into Van Leeuwen's categories.

From the collocation results for GENDER in AA, three themes or semantic clusters were evident. The largest cluster was gender used in the context of a sub-disciplinary subject, field of study or as epistemology in archaeology.

Group one:

Discipline	**archaeology, archaeological, research, study, studies, ethno-archaeological, interests, bias, imbalance, social, recent**

The second was words relating to the division of labour, which can be seen as similar to Van Leeuwen's 'functionalization'. They have instead been grouped as a 'performance' of gender (as per Butler (1991) where the performativity of gender is a repetition of acts, by way of labour, as per dominant conventions of the society studied), as well as a performance of tasks or roles.

Group two:

Performance	**labor, space, subsistence, pottery, cultivation, roles, relations, social, class, work, fitness, hunting, warfare, ritual, identity, status, masculine**

The third category was gender used in the context of identification or classification to group human remains, fossils or artefacts. The words may be used to attribute gender, sex, age and so forth to a subject.

Group three:

Identification (classification)	**age, percent, women, female, sex, individuals**

The most frequent collocation of GENDER overall in AA is with ARCHAEOLOGY/IES, which occur together 259 times. GENDER occurs in the left position of **archaeology** 102 times (denoting use as 'gender archaeology') and on the right 71**,** while **archaeological** occurs 60 times to the left, such as in 'archaeologies *of* gender', and 26 times to the right. The results presented within their immediate context show that, irrespective of time and size of the text, the theme of gender as a subject in itself dominates in AA. In contrast, the highest MI score for GENDER was with the word *masculine* (13.82) which indicates a highly significant relationship between the two words.

In terms of GENDER, these combinations of words can also be further understood according to their word class or category meaning (Halliday 1998). That is, whether in the context of the collocation, gender is considered a thing (expressed via a noun), a quality (expressed via an adjective or when it joins an adjective or another noun) or a process (expressed via a verb). As such, analysing whether gender is more often used as a noun, adjective or verb can reveal the way in which gender is perceived, i.e. whether as an abstract notion, a norm of research or something which takes place in practice. Category meanings were adapted from Varga (2010:86). These are:

i) gender as noun: e.g. 'knowledge about prehistoric societies and how they may have been structured by gender.'
ii) gender as noun modifying another noun: e.g. 'attempts to integrate a gender archaeology into mainstream…'
iii) gender entering a compound adjective: e.g.'The results produced by those working from a gender-sensitive standpoint are not explicable'
iv) gender as an adjective: e.g.'Gender roles adapt individuals for war roles'
v) gender as a verb: e.g. 'By gendering prehistoric men it becomes clear that they can only stand for themselves'.

Using this classification then, it is clear that most articles in AA are discussing gender archaeology as a subject or an approach, and use gender as a noun modifying another noun–in other words, a 'thing'. A sample of the concordance lines identified by the

collocations in Table 7 illustrate the ways these results appear in text (see Appendes 2 and 10 for all concordance lines for all collocates).

Table 7: Concordance lines for GENDER in AA relating to the 'discipline' category

1985		
representations of gender and	**gender**	ideology in archaeology
Recent concern with the archaeological study of	**gender**	(Conkey 1982; Conkey and Spector 1984)
how archaeological interpretations of	**gender**	roles in the past have been
a set of unexamined assumptions about	**gender**	has crept into archaeological interpretation
1992		
were presented in a session on	**gender**	and archaeology at the annual meeting
the prospects for archaeological work on	**gender**	seem to have had taken hold
interest before now in women and	**gender**	as subjects of archaeological inquiry
Why is the archaeology of	**gender**	emerging only now? Where are the preliminary
2003		
Archaeological research focusing on	**gender**	issues in particular is poorly represented
material culture, and native perspectives.	**Gender**	archaeology is paradigmatic of processual
In sum, the archaeology of	**gender**	is an exemplar of what
In archaeological studies of	**gender**	in North America, practice theory
very idea of an archaeology of	**gender**	was a feminist concept, and many
2013		
influences. A vigorous archaeology of	**gender**	has had little impact on the
is a central goal of	**gender**	archaeology (Conkey and Spector 1984)
gender, and the limited impact of	**gender**	archaeology on the discipline
research, yet the critiques of	**gender**	archaeology and feminist anthropology

From examining the concordance lines (in Table 7 and Appendix 2) there is, however, a subtle change in meaning over time. While the central theme across the journal is explaining what gender archaeology is (a 'thing' to be defined), a shift in discussion occurs when it moves from definition to evaluation. The same idea—a lack of content 'about' gender in archaeology—is then presented and re-presented repeatedly from the 1990s to 2013, and suggests no change overall.

The second emergent discourse in AA is around the gendered division of labour in the performance category (or functionalization). Most content on this theme relates to challenging biases and stereotypes vis-à-vis women's roles and activities, or by describing gendered roles and/or tasks. In this sense there is no marked shift in theme across time. In this cluster, GENDER is often used as a compound adjective or an adjective indirectly describing something people 'did' or performed. This is demonstrated in the concordance lines in Table 8, where for example, in 1997 an article is concerned with gender-specific roles in ritual and later in 2009, gender specific roles in hunting.

Table 8: Concordance lines for GENDER in AA relating to the 'performance' category

1996		
the division of labor according to	**gender**	have long been recognized among hunter
the chronology of the development of	**gender**	-based division of labor
in which division of labor along	**gender**	lines was different from that
1997		
evidence exists for the antiquity of	**gender**	roles in Pueblo ritual
ritual integration and	**gender**	specific roles in ritual as
for an archaeological interpretation of	**gender**	roles. Men's work as logistical
2005		
colonial labor in Native households and	**gender**	relations through studies of dietary
into the origins of class and	**gender**	-based status differences in these early
and produce more. Far from the	**gender**	-specific work organizations are manifested
and were broken down along	**gender**	-differentiated subsistence activities an
2009		
of activities is attributed, in part, to	**gender**	associations with hunting preparations
production and processing tools is stereotypical of	**gender**	roles (Gero 1991:167)
interpreted here as gender and	**gender**	-related ritual activities associated
inner and outer activity zones conforms to	**gender**	roles observed for arctic cultures,

The third cluster of terms relates to identification or the 'gendering' of individuals or human remains as a means of data categorisation. Looking at the most salient collocations, in many instances GENDER is being used as a substitute for SEX, but this lessens over time, and by 2008 there is a clearer distinction between sex and gender. The concordance data in Table 9 demonstrates the ambiguity surrounding the description of gender and age for human remains (for example in data from 1990).

Table 9: Concordance lines for GENDER in AA relating to the 'classification' group

1990		
determinations of age at death and	**gender.**	Ages were assigned to 86 percent
distribution of fatalities by age and	**gender**	were indeterminate for
the individuals in the sample and	**gender**	to 85 percent of the adults
to determine age at death and	**gender.**	
female and 10 are male. (Age and	**gender**	shading denotes fatalities from
distribution of fatalities by age and	**gender**	were indeterminate for
2008		
its use were correlated with status	**gender,**	and age. It has been demonstrated
distribution was continuous. Again, neither	**gender**	nor age correlates with these differences
2010		
As a result, conceptualized patterns of	**gender,**	age, class, and ethnicity come
to understand the complexities of identity	**gender,**	ethnicity, and other subtle social

The results show statistically significant co-occurrences of GENDER with the words WOMEN and FEMALE, but not with MEN or MALE. It is also noteworthy that the results of the collocations in Table 9 show one co-occurrence of GENDER and MASCULINE, and no results for GENDER and FEMININE that meet the criteria for significance. Theoretically, gender is about masculine and feminine identities, and thus the hypothesis was that *gender, masculine and feminine* should co-occur in a statistically significant manner, but this is not the case in AA. Figure 27 demonstrates this by way of the keyword results for GENDER, MASCULINE and FEMININE together in AA. It is apparent that the frequency results are very low, but also that there is a very negligible relationship between the two

terms and GENDER. Figure 27 also shows that in the years 1994, 2000, 2006 and 2011 there is a slight increase in frequency of both FEMININE and MASCULINE, and that these two terms co-occur, but overall GENDER is used over 10 times more often, and not in parallel.

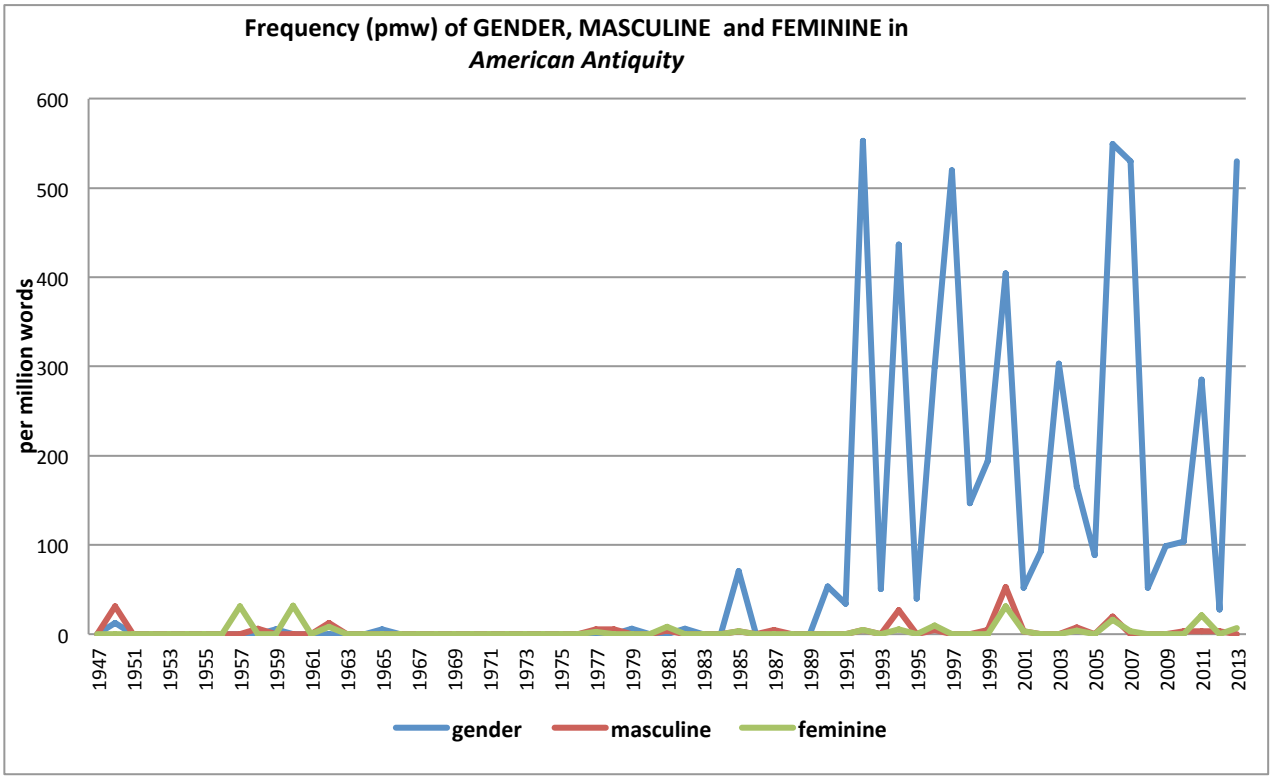

Figure 27: The proportional frequencies of GENDER, MASCULINE and FEMININE in *American Antiquity*

Further interrogation around the keywords GENDER, FEMININE and MASCULINE was required. The collocation results were very minimal for MI scores of three or above, with MASCULINE only meeting this parameter in three years and FEMININE in two. Given this small amount of data it is not possible to make sweeping generalisations, apart from the fact that there is an absence of these words in AA.

Table 10: Top five collocations of MASCULINE in AA, according to MI-score and frequency by year

Masculine	1	2	3	4	5
1950	pursuit (3)	-	-	-	-
2000	traits (8)	gender (8)	biological (4)	women (3)	figure (3)
2006	males (3)	-	-	-	-

Table 10 summarises the results of all significant collocations for MASCULINE. The highest MI score was 17.21 when occurring with the word *males*. In 1950 the term is used in the context 'manufacture of pottery is a *masculine* pursuit'. The 2000 and 2006 results do not have a theme, but concern roles, representation in art, and multiple genders.

In effect, there is only one paper in the AA corpus that has any significant discussion of FEMININE, written in 2000 by Munson (see Table 11). The result from 1960 describes imagery in the paper, 'Sex, gender, and status: human images from the Classic Mimbres'. The highest MI was 13.405 when FEMININE occurred with the word *gender*.

Table 11: Top five collocations of FEMININE in AA, according to MI-score and frequency by year

Feminine	1	2	3	4	5
1960	glyphs (5)	prefixed (4)	head(4)	heads (3)	-
2000	traits (6)	gender (6)	string (3)	-	-

These results raise the question: if AA is not relating gender to the concepts of feminine and masculine, are the words MALE and FEMALE associated with gender, and if not what is the context of their use? The overall frequency results pmw for MALE and FEMALE are much higher than those for FEMININE and MASCULINE. Figure 28 shows that these words are often used prior to and after the introduction of GENDER into the data. From 1967, and particular through the 1970s, MALE and FEMALE begin to co-occur as binomial pairs, and do so in most years afterwards. As shown in Figure 28, both GENDER and MALE have an increasingly positive trend line and both are stronger after 1992. FEMALE also increases, but there is no real upward trend after 1992. There is a correlation between frequency of GENDER and MALE in 1985, between 1994 and 1997, and between 2003 and 2006. For FEMALE and GENDER, there is a relationship in use from 1994 to 1997, and in 2000, 2003, 2006 and 2011. Overall, MALE is used more often than FEMALE.

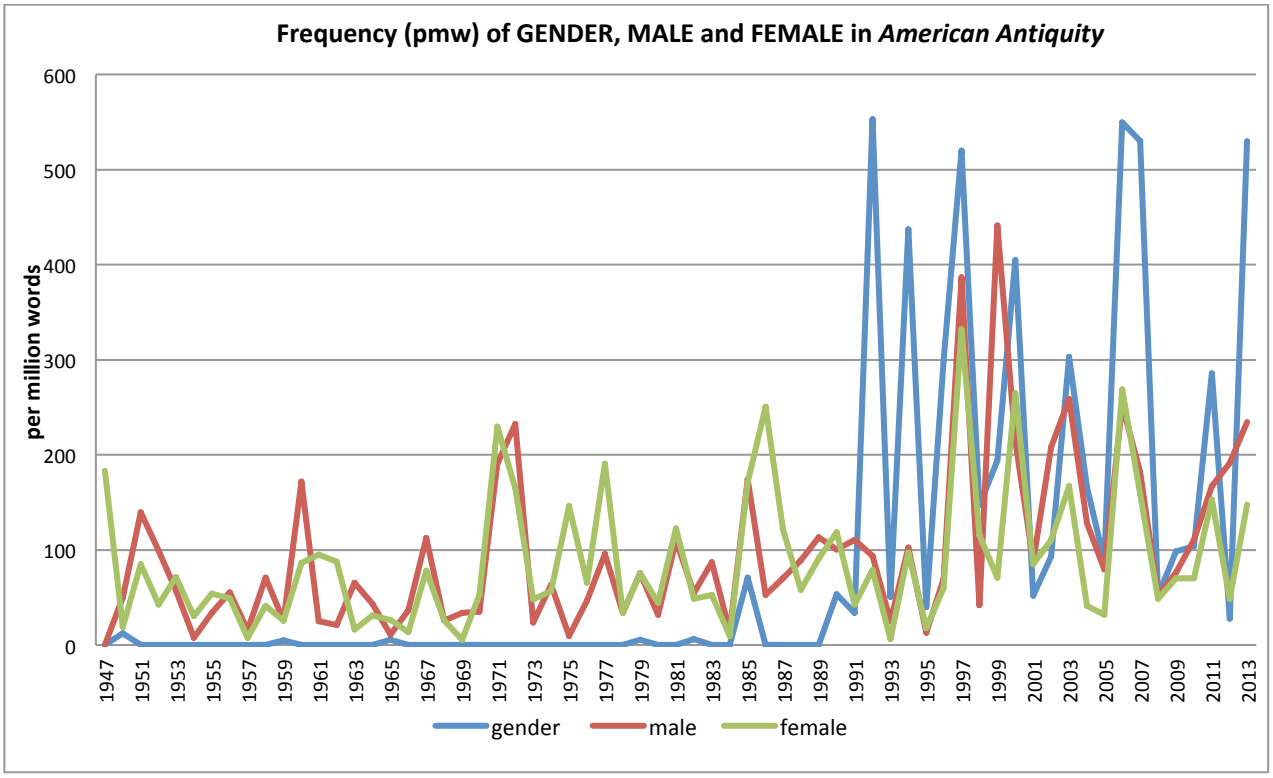

Figure 28: The proportional frequencies of GENDER, MALE and FEMALE in *American Antiquity*

7.4.2 The use of MALE in AA

To further expose the context in which MALE is used in AA, collocation results are provided in Table 12. Although there is a relationship between an increased frequency of both keywords MALE and GENDER, as shown in Figure 28, the word GENDER is not a significant collocation of MALE in any year. This means that, while there is a relationship between the words male and gender in terms of frequency and co-occurrence, the word MALE is not used as a noun modifier for GENDER (such as in 'male gender'), nor in combination with an adjectival modifier. Thus, MALE is used under the umbrella or theme of gender, but not in its immediate context. MALE is used most often and more often with its binomial pair FEMALE. The word with the highest MI Score was, in contrast, *stature* (18.894).

Table 12: Top five collocations of MALE in AA, according to MI-score and frequency, by year

Male	1	2	3	4	5
1950	type (3)	adult (3)	-	-	-
1951	years (14)	burial (14)	about (9)	extended(5)	-
1952	adult (10)	burial (5)	middle (3)	-	-
1953	none (5)	flexed(5)	very(3)	subsoil (3)	poor (3)
1955	inches (6)	pit (4)	depth (4)	burial (4)	adult (4)
1956	Osceola (4)	adult (4)	head (3)	bundle(3)	-
1958	harpoon(3)	female(3)	-	-	-
1960	group (16)	female(15)	date (9)	figure (5)	monuments (4)
1961	relationship (3)	-	-	-	-
1963	union (3)	crania(3)	American(3)	-	-
1966	marking(3)	-	-	-	-
1967	stature(13)	late(4)	classic(4)	population(3)	female(3)
1970	years (3)	-	-	-	-
1971	female (15)	wear (5)	teeth(5)	maxillae(5)	degree(5)
1972	female(17)	male (12)	genetic(7)	relationship(6)	cemetery (6)
1974	female(3)	-	-	-	-
1977	female(23)	graves (6)	types (5)	mounds(4)	between(4)
1978	names (3)	female(3)	-	-	-
1979	female(7)	site (3)	cluster (3)	children (3)	-
1981	female(7)	male (8)	period (6)	deer (6)	total (4)
1982	female(6)	ratios (3)	outside (3)	-	-
1983	female(4)	burials (4)	primary (3)	-	-
1985	burial (19)	years (17)	female(14)	adult(11)	kettle(7)
1986	adult (3)	-	-	-	-
1987	female(6)	graves (4)	members (4)	-	-
1988	female(6)	labor (4)	force (3)	-	-
1989	female(18)	children (8)	adult (8)	male (6)	maize (3)
1990	age (4)	years (3)	tassel (3)	maize (3)	female(3)
1991	female (4)	-	-	-	-
1992	female(7)	steller(3)	sea(3)	percent(3)	adult(3)
1994	female(7)	burial (5)	adult (5)	young (3)	mind (3)
1996	society (7)	male (4)	-	-	-
1997	female(16)	teams (20)	hunting (14)	male (8)	ritual (5)
1999	Sidney (79)	traits (13)	cranial (13)	contact (10)	period (9)
2000	mobility (19)	female(19)	logistical (17)	km (12)	average (11)
2001	undetermined (9)	sex (9)	adult (9)	female(6)	male (4)
2002	adult (12)	old (9)	year (7)	individual (5)	hunting (5)
2003	female(23)	names (6)	found (6)	hunting (5)	adult (5)
2004	shaping (6)	role (6)	age (5)	York (3)	woman (3)
2005	female(5)	male (4)	hunters (4)	competition (4)	indicate (3)
2006	female(30)	traits (4)	associated (4)	spirit (3)	signs (3)
2007	female(16)	percent (6)	adult (6)	canyon (5)	related (3)
2008	ratios (4)	thousand (3)	mean (3)	isotope (3)	adult (3)
2009	female(8)	burial (4)	activities (4)	foraging (3)	adult (3)
2010	signaling (12)	strategies (6)	costly (6)	behaviour (6)	female(5)
2011	female(12)	burials (7)	adult (7)	family (5)	women (3)
2012	extended (13)	limestone (9)	male (8)	cover (7)	activity (6)
2013	women (10)	activities (8)	female(7)	male (6)	men(5)

The collocation results for MALE emerged as being in the two main semantic categories, *identification* and *performance*. Within the category of 'identification' further distinctions could be drawn under the subcategories of 'relational' and 'physical' identification:

1. Identification

a) Relational/kinship/binomial pairs: female, woman, women, male, men, children, family, group, members, relationship, teams

b) Classification/human remains/burials*:* adult, burial, age, sex, years, crania, stature, flexed, extended, population, cluster, genetic, teeth, graves, names, mounds, cemetery, ratios, percent

2. Performance: Labor, hunting, hunters, ritual, traits, role, mobility, strategies, foraging, behaviour, activity, activities

Another benefit to using the collocations is that they are a way of cross-checking and accessing change in meaning and use over time with the frequency data. Diachronically, those in the 'performance' category begin appearing from the late 1990s, reflecting more of an interest in describing what males *do*, whereas those in the 'identification' category, about who males *are*, are consistently high across the corpus and over time. In terms of the semantic clusters under 'identification' it is apparent that the identification of males/(male) human remains is a persistent theme in AA. The concordance lines (see Table 13 and Appendix 2) for MALE confirm this context of use, particularly in combination with this large scale, statistically significant evidence.

Table 13: Sample of concordances for MALE in AA in each decade based on collocation results

1950		
long-bone fragments of an adult	**male**	believed to belong to a later
a later period. Burial 3. An adult	**male**	skull lay in clean sand beneath
secondary burial of a young adult	**male**	whose rotted bones were stained
1960		
appropriate to the predominance of the	**male**	role in food getting. The culture.
poorly preserved bone from a single	**male**	The skeletal remains were from 1

adult		
A primary human burial of an adult	**male**	between 25 and 30 years of age in
pairs, one of each pair presenting a	**male**	figure, the other a figure wearing a
1971		
homogeneous patterning in the artifacts (both	**male**	and female) from one
clearly indicate differences between	**male**	and female dentition.
probably representing various activities	**male**	and female, in addition to the
other reason for the difference in	**male**	/female distribution. In any case a
this brief study. The contrasts between	**male**	and female attrition can perhaps be
1982		
adopt practices that produce high	**male**	/female ratios, i.e., a male- rich
outside, culture and nature	**male**	and female; furthermore, that the
categories of inside/outside and	**male**	/female, it should be possible to
cave:inside/outside; nature/culture;	**male**	/female; life/death. Instead of
If we suppose balanced	**male**	female ratios, in the short run it
1991		
the number of individuals achieving higher	**male**	status was probably lower in prehistoric
among the 41 adults. The percentages of	**male**	and female violent deaths
One such individual, an adult	**male**	is included in the violent-death
reasonably close match between the Oneota	**male**	and female warfare deaths is atypical
between the large numbers of Oneota	**male**	and female violent deaths. Perhaps
2000		
- vidual b, suggesting that this adult	**male**	was decapitated while some soft tissue
when possible, relying upon depictions of	**male**	or female genitalia, breasts, and beards
adult males, one probable adult	**male**	one adult female, two adolescents
the Old Baton Rouge Penitentiary. Both	**male**	and female slaves were prisoners
measurements more consistent with a	**male**	sex attribution, and
2010		
of structures, we should differentiate	**male**	and female activities, although such

between		detailed
applications suggest that risky or costly	**male**	hunting behavior may have been used
or intensification of costly signaling by	**male**	hunters, because the encounter rates
of many archaeologists to identify costly	**male**	foraging behavior in an attempt to
similar to that of an adult	**male**	in the human remains assemblage from

Close examination of collocates in their linguistic environment shows that approximately 35% of instances are based on the syntagmatic relation of conjunction, e.g. as in *interpreted differently when recovered from **male** versus **female** burial contexts* (1985). This typically denotes a salient, familial, gender-based division. In context, the use of MALE is a noun pre-modifier, especially in the absence of the equivalent binomial opposite term FEMALE.

In examining the concordances, what also becomes apparent is the positioning of FEMALE next to MALE. In the sample concordance lines all instances of the use FEMALE occur to the right of MALE. Furthermore, a check of the total number of collocations for MALE and FEMALE in AA, reveals that they occur together in a statistically significant manner 371 times (see Appendix 2), with FEMALE 284 times to the right of MALE, and only 87 times to the left. FEMALE does not come before MALE at a higher rate in any year, and there is no change over time.

Male and Female order: powerful identities first?

Baker (2014:92) and Freebody and Baker (1987:98) both refer to 'male firstness' as a distinct type of gender bias. They note that in cases where a writer has attempted to be inclusive, mentioning both sexes, one must come first, and generally the male form is given precedence. Baker (2014) relates the example of the Corpus of Historical American English (CoHAE), where people are 263 times more likely to put men before women in a sentence than the reverse. In the case of AA, the preference is also to put male before female. This preference is important for a number of reasons. Evidence about the frequencies of other binomial pairs suggests that the more powerful identities tend to come first. For example, it is more common to see the orderings: parent and child,

teacher and pupil, master and slave (Baker 2014:93). Additionally, preferable states also come first: good and bad, happy and sad, rich and poor. This phenomenon dates to the 16th century, when English grammarians argued that placing man before woman kept a 'natural order' (Bodine 1975). In terms of binomial pairs, it could be argued that people are primed to consider the first element of the pair as being preferred or more important, due to their prior experience with language use, and that the opposite is somehow incorrect or sounds unnatural. In this light, given that FEMALE comes predominantly after MALE in AA, WOMEN is also more likely to follow on from MEN, and WOMAN from MAN.

7.4.3 The use of FEMALE in AA

As shown in Figure 28, the frequency of FEMALE mostly mirrors the usage for MALE, but the word occurs less often overall. It reached a high of 337 pmw in 1997, but subsequently declined to as low as 27 pmw in 2012, with an overall frequency around 100 pmw across the corpus. As FEMALE was the most frequent collocation of MALE, the reverse is also true, as shown in Table 14. There are differences between the MALE and FEMALE collocations, with both semantic differences and shifts evident. One notable result is the high MI score for FEMALE and *husband* (18.666), given that 'wife' did not occur at all in the collocation results for MALE. Baker (2014) similarly found in the CoHAE the word 'wife' was always referred to more often than 'husband' and argued that this shows a type of male bias in writing. Historically, males have received more attention than females in academia, so they will normally be written about more than females. However, in the case of this research, in broader American society wife is the exception. At the time(s) when the corpus data were written, wife and husband indicate a familial/heterosexual relationship, and women are more likely to be identified as being in this relationship than men. This pattern is so strong that it over-rides the first rule about male terms being more frequent. In other words, wife occurs so frequently because it implicitly refers to a man.

Table 14: Top five collocations of FEMALE in AA according to MI-score and frequency, by year

Female	1	2	3	4	5
1951	burial(11)	years (9)	extended(3)	-	-
1952	adolescent(5)	-	-	-	-
1953	flexed (7)	poor (6)	subsoil (3)	fair (3)	-
1955	pit (6)	inches(6)	burial(6)	adult(6)	depth (5)
1956	adult(7)	extended (4)	-	-	-
1958	male (3)	-	-	-	-
1960	male(15)	group(10)	glyph (5)	frog (4)	female (4)
1961	head(7)	glyphs(6)	glyph(5)	relationship(4)	-
1963	adult (9)	stature (3)	male (3)	-	-
1970	adult(4)	skull(3)	-	-	-
1971	male(15)	case (6)	wear (5)	maxillae (5)	tooth (4)
1972	male(17)	similarity(6)	genetic(6)	female(6)	cross (5)
1973	young (3)	-	-	-	-
1974	male (3)	fertility (3)	-	-	-
1975	forms (8)	incised (3)	figurines (3)	figure (3)	breasts (3)
1977	members (44)	male (23)	ruling (22)	one (22)	old (22)
1978	male (3)	-	-	-	-
1979	cluster (8)	male (7)	children (5)	adults (4)	males (3)
1981	male (17)	female (6)	deity (6)	tomb (5)	burial (5)
1982	male (6)	societies (4)	-	-	-
1983	male (4)	flexed (3)	-	-	-
1985	burial (20)	years (17)	male (14)	Kettle (11)	silver (8)
1986	figurine (8)	Birger (6)	deity (5)	west (4)	back (4)
1987	male (6)	work (4)	graves (4)	Infanticide (3)	-
1988	male (6)	body (5)	parts(4)		
1989	male (18)	female (10)	children (8)	lactating (4)	adult (4)
1990	Teosinte (8)	ear (7)	spike (5)	burial (5)	Inflorescence (4)
1991	male (4)	deaths (3)	-	-	-
1992	male (7)	proportion (3)	Percent (3)	-	-
1993	male (7)	stature (3)	burials (3)	burial (3)	-
1997	male (44)	teams (14)	days (10)	female (8)	ritual (7)
1998	greater (7)	site (4)	female (4)	three (3)	relatedness (3)
1999	male (6)	pubis (4)	-	-	-
2000	logistical (21)	mobility (20)	male (19)	average (13)	foraging (10)
2001	male (6)	one(5)	sex(4)	burial(4)	adult(4)
2002	adult(6)	residence(5)	old(5)	based (5)	year(4)
2003	male (23)	names(9)	effigies(8)	one(5)	covariance(4)
2004	male (5)	-	-	-	-
2005	male (5)	-	-	-	-
2006	male (30)	effigies (24)	effigy (15)	figure (8)	pound (7)
2007	male (16)	percent (6)	material (6)	adult (6)	migrants (5)
2008	adult (4)	ratios(3)	knight (3)	age (3)	-
2009	male (8)	figures (7)	niche (5)	figure (4)	deities (3)
2010	male (5)	found(4)	years (3)	remains (3)	old (3)
2011	male (12)	gendered (11)	burials (7)	adult (5)-	groups(4)
2012	years (3)	virtue (3)	-	-	-
2013	male (7)	archaeologists (5)	adult (5)	images (4)	nudity (3)

There are several interesting trends that emerged from the collocation data. Under 'identification' the additional sub-category of 'physical identification' was added. This was because the collocated words were on the subject of identification, but were neither classifications (such as age, adult, etc.), nor terms relevant to discussions of human remains or burial practices. There were also a number of words associated with female representation, and thus an additional category 'iconography and symbolism' was added:

1. Identification

a) Relational/kinship/binomial pair: male, children, relationship, members, teams, societies, groups, relatedness

b) Classification/human remains/burials*:* adult, age, years, sex, adolescent, young, old, percent, burial, remains, graves, extended, flexed, cluster, pit, ratios, names, pubis, skull, death

c) Physical: stature, nudity, breasts, head, fertility, ear, body, incised, infanticide, lactating

2. Performance: gendered, work, foraging, ritual, ruling, social, poor, virtue

3. Iconography/symbolism: deities, figure, image/s, glyph/s, figurine/s, effigy/ies

Differences between the collocations of MALE and FEMALE become apparent through the refinement of the data into these additional categories. Words around the body and reproduction, such as fertility and infanticide, were absent in the MALE data. There are also more terms related to depictions of FEMALE in art, symbolism or iconography. This may be an aspect of the 'male as norm' style of interpretation, where all representations in art or symbolism are by default male, with figures identifiable by physical characteristics such as breasts being unusual and, therefore, female. As the 'female' in art is a tangible way of 'finding' women in the archaeological record, they thus receive more focus. Both these additional categories for FEMALE suggest more concern with the female body, or perhaps with the 'otherness' of the female body.

There are also more collocations that fall into the group of 'relational' identification, indicating that FEMALE is associated with the theme of kinship, and social or community

bonds. Words such as relationship, teams, groups, and relatedness occur with statistical frequency alongside female (so emphasising the carer/nurturer stereotype, whereas male is more individualised and separate). The concordance lines for the three main areas of difference elucidate further the ways in which FEMALE is discussed.

Table 15: Sample of concordance lines for FEMALE in AA relating to iconography and symbolism

1975		
appendages represent breasts and symbolize	**female**	figures. One of the female figures exhibits
the suggestion that the principal function of	**female**	figurines was in increase cults
region immediately to the east practice	**female**	infanticide (Ruecking 1955). This and other
body decoration was confined to certain	**female**	forms, and burials from the area usually
1981		
An excess of older males might be expected if	**female**	mortality surrounding childbirth
temple must have been dedicated to a	**female**	deity, as was the case
The suggestion that Tabai was a	**female**	deity from which elite lineages
2006		
that the hips and bellies of the	**female**	effigies protrude more than their male
vulva, and accentuated buttocks. Another	**female**	effigy vessel
clay figurines often attributed to the	**female**	body, does not hold up
a single individual takes both male and	**female**	gender traits as a common

Table 16: Sample of concordance lines for FEMALE in AA relating to the physical

1974		
requiring an increase in	**female**	fertility to maintain the population size
the chance of a mated	**female**	giving birth to live offspring i
should be similar to that of	**female**	infanticide. In a monogamous society, infanticide
1987		
even if a period of adolescent	**female**	sterility is taken into account
spousal separation, and high	**female**	work loads in explaining low fertility

reproductive capacities of their sisters or	**female**	relatives, they could play a direct
their absence from their wives, reduced	**female**	work load and period of lactation
2000		
nutrition, contraception and abortion,	**female**	workloads, venereal and other disease
energy expended in carrying children during	**female**	logistical mobility. Distance
relying upon depictions of male or	**female**	genitalia, breasts, and beards to

Table 17: Sample of concordance lines for FEMALE in AA relating to relations/kinship or community

1977		
the husband of one of the	**female**	members of the lineage would be
The husbands of the last	**female**	members of the old ruling patrilineages.
attention to relationships between male and	**female**	role behavior
within those buried, between male and	**female**	child and adult, and, if
1998		
strong evidence for greater internal	**female**	relatedness in one ostensibly matrilocal
their father's relatives and the	**female**	offspring remaining behind with their mother
of these 'leaders.' Most were not	**female**	(possibly arguing against inherited status
2002		
residence in a marginal environment. A	**female**	-based pattern of postmarital residence
primarily agricultural- was organized around	**female**	work groups composed of individual
of inherited status, perhaps along the	**female**	line. Nonlocal resources
social structure was organized around	**female**	-based residence and kin structure has

The concordance lines above (Table 15, 16, 17 and in Appendix 2) exhibit some overlap of the themes of female representation, the body and relationships, for example where familial and kinship roles determine fertility or status, or ritual or symbolic practice, or vice versa. The data confirm that in AA, by and large, most discussion around males and female falls into stereotypical male and female roles whereby males are active, participate in labour and status activities, but females are primarily of

interest in terms of their 'otherness', their reproductive ability, or their physical and 'mystical' capacities.

7.4.4 The use of SEX in AA

Where differences between sex and gender become murky is where gender is used as a synonym for sex, and when gender is linked back to the male/female dichotomy. Results of the keyword frequency show a link between GENDER and MALE and FEMALE, which can be compared to the results for SEX, MALE and FEMALE, as shown in Figure 29.

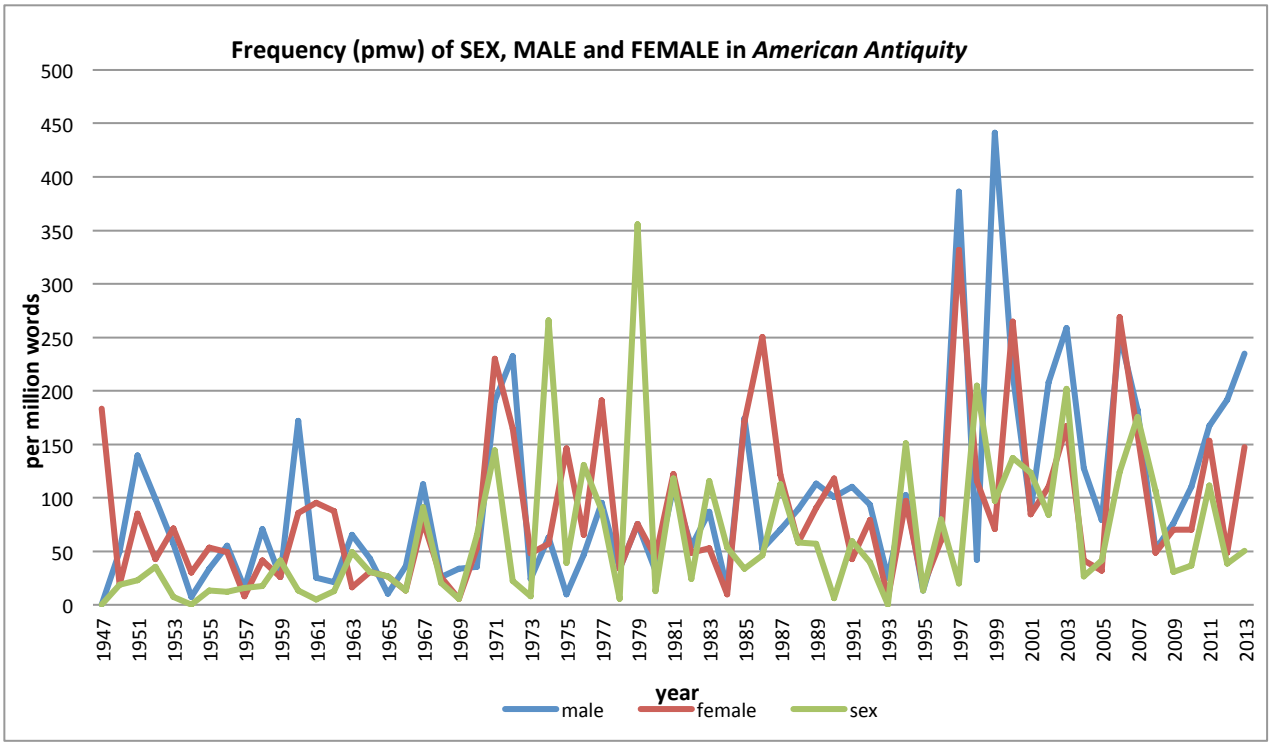

Figure 29: The proportional frequencies of SEX, MALE and FEMALE in *American Antiquity*

In comparing Figure 29 to Figure 28, it is apparent that the relationship between SEX, MALE and FEMALE is less distinct. SEX is present within the literature from the 1940s and across the corpus, but does not occur at the same time or rate as MALE and FEMALE, except in the years 1967, 1971, 1981, 1994, 2003 and 2011. More interestingly, there is an inverse relationship between SEX and FEMALE in 1961, 1990 and 1997, where the frequency of FEMALE increases at the same time that SEX decreases. Overall, the use of SEX is relatively low, mostly falling below 100 pmw in AA, but there are a series of peaks and troughs, with the highest peak being 355 pmw in 1977 and an

overall upward trend after 1997. In ascertaining whether Hill's (1998) and Geller's (2008) claims that there is widespread misuse of terminology related to GENDER and SEX in archaeology holds true for AA, both collocations and concordance lines provide additional insight.

Table 18: Top five collocations of SEX in AA according to MI-score and frequency, by year

SEX	1	2	3	4	5
1950	may (3)	-	-	-	-
1952	contained (5)	two (4)	indeterminate(4)	grave (3)	adult(3)
1963	determination (3)	-	-	-	-
1965	age (3)	-	-	-	-
1966	age (3)	-	-	-	-
1967	age (11)	determination(4)	table(3)	according (3)	-
1970	age (9)	tooth(7)	position(8)	group(3)	grave(3)
1974	ratio(22)	fertility(11)	mortality(9)	specific(8)	age(8)
1977	relevant(44)	indicate(23)	systems(22)	age(15)	status(6)
1979	age(50)	composition(11)	clusters(10)	status(6)	figure (5)
1981	age(19)	ratios(8)	period(7)	sample(5)	tomb (4)
1982	ratios (3)	-	-	-	-
1983	age(11)	data (4)	burials (4)	undetermined (3)	identified (3)
1984	age(8)	year (3)	college (3)	-	-
1985	age(6)	-	-	-	-
1986	age(8)	bound(3)	-	-	-
1987	age(12)	data (4)	single (3)	-	-
1989	age(9)	-	-	-	-
1992	age(4)	gender (3)	-	-	-
1994	age(19)	size (6)	sex (4)	side (3)	differences (3)
1996	age(10)	distributions (3)	-	-	-
1998	sample (10)	determinations (10)	site (6)	lab (6)	total (5)
1999	age(6)	traits (4)	ethnic (4)	size (3)	ridge (3)
2000	gender (17)	male (7)	traits (6)	individuals (5)	biological (4)
2001	undetermined (16)	age(13)	unknown (10)	sex (10)	adult (10)
2002	age(8)	unknown (4)	old (3)	distribution (3)	one (3)
2003	age(21)	effects (9)	group (8)	mobile (7)	individuals (5)
2005	age(6)	-	-	-	-
2006	gender (11)	biological (5)	frequency (4)	reflect (3)	-
2007	age(13)	burial (7)	specific (6)	diversity (6)	biological (5)
2008	differences (14)	ratios (9)	age(9)	isotope (3)	burial (4)

2009	age(6)	years (4)	unknown (3)	-	-
2010	age(5)	indeterminate (4)	marks (3)	-	-
2011	age(13)	indeterminate (10)	adult (8)	young (4)	sex (4)
2012	age(8)	position (4)	male (3)	burials (3)	-
2013	status (3)	labor (3)	-	-	-

There are two emergent categories for SEX, and like GENDER, these are words relating to Van Leeuwen's 'functionalization' (grouped as a 'performance') and 'identification' (relating to the classification of humans). Most collocations fall into the 'identification' category, and these are most closely aligned to what is biological sex. None of the terms are clearly related to sex in terms of sexuality or sexual intercourse.

Identification (classification)	age, position, burial/s, indeterminate, young, sex, male, years, ratios, biological, sample, site, size, distribution, differences, determination, grave, mortality, fertility

Performance	labor, status, gender, traits, ethnic

Those in the 'performance' group are more ambiguous, and scrutiny of the concordance lines clarifies how these words are paired with SEX.

Table 19: Sample of concordance lines for SEX in AA

1974		
of labor according to age and	**sex**	and mutual food-sharing. On the
range is controlled by mortality, fertility,	**sex**	ratio, and cultural rules on the
population fertility rates, mortality rates, and	**sex**	ratio, as well as by cultural
1977		
to determine from grave goods the	**sex**	age, status, and the relative date
and others with no a priori	**sex**	links (e.g., dress pins, fibulae

this proves so, graves even without	**sex**	-linked goods might perhaps be sexed
is not limited solely by age,	**sex**	personal qualities, and achievement
1992		
and/or ethnohistorically documented	**sex**	/gender systems. In
about gender that underpin contemporary	**sex**	roles, they came to see that
1999		
size can be explained by both	**sex**	and ethnicity. Within a single
affected by hand and body size,	**sex**	and ethnic affiliation in addition
the latter case, which traits were	**sex**	-linked and whether it was monogamous
2000		
The physical traits of	**sex**	alone when considering the organization of
traits were represented on each	**sex.**	Traits with significant occurrence on males
variety of cultural traits with biological	**sex**	could be determined, had no
behaviors, beliefs, and ideologies related to	**sex**	As described in the
2013		
of the division of labor by	**sex**	is a central goal of gender archaeology
the universal division of labor by	**sex.**	For example, women could be
in their diet. No pattern of	**sex**	or status-based dietary difference is

The concordance lines (Table 19 and in Appendix 2) demonstrate that SEX is consistently used correctly in terms of a biological marker, particularly in terms of the identification of human remains. In the early decades of the journal, sex was used in place of gender, but this is reflective of wider social views of sex and gender, and not peculiar to this journal. The context of use of those in the 'performance' category also relate to classification when viewed with their concordances, and what is apparent is that there is an uptake of gender theory across AA after 1992. The collocation frequency and semantics of SEX can be displayed as a word cloud. Figure 30 below is a word cloud made up of the entire collocation results for SEX in the AA Corpus.

Figure 30: Word cloud from total collocations of SEX in the AA corpus

7.4.5 The use of MEN and WOMEN in AA

The reasons for including the words MEN and WOMEN and their relevance to gender theory were outlined in 6.2.7 and 6.2.8. A comparison of the keywords and collocational patterns of these nouns provides a picture of use and representation from the American point of view, as represented in AA. Figure 31 below shows the keyword results for the highest frequency scores for WOMEN—1467 pmw in 1947 and 1083 pmw in 2013—both of which occur as outliers in the first and last years of the AA corpus. In between

these scores the word MEN appears more frequently than women from 1948 until the 1980s, and in 48 of the 66 years analysed. The peak for MEN is 553 pmw in 1986, with WOMEN beginning to appear at higher rates after this year.

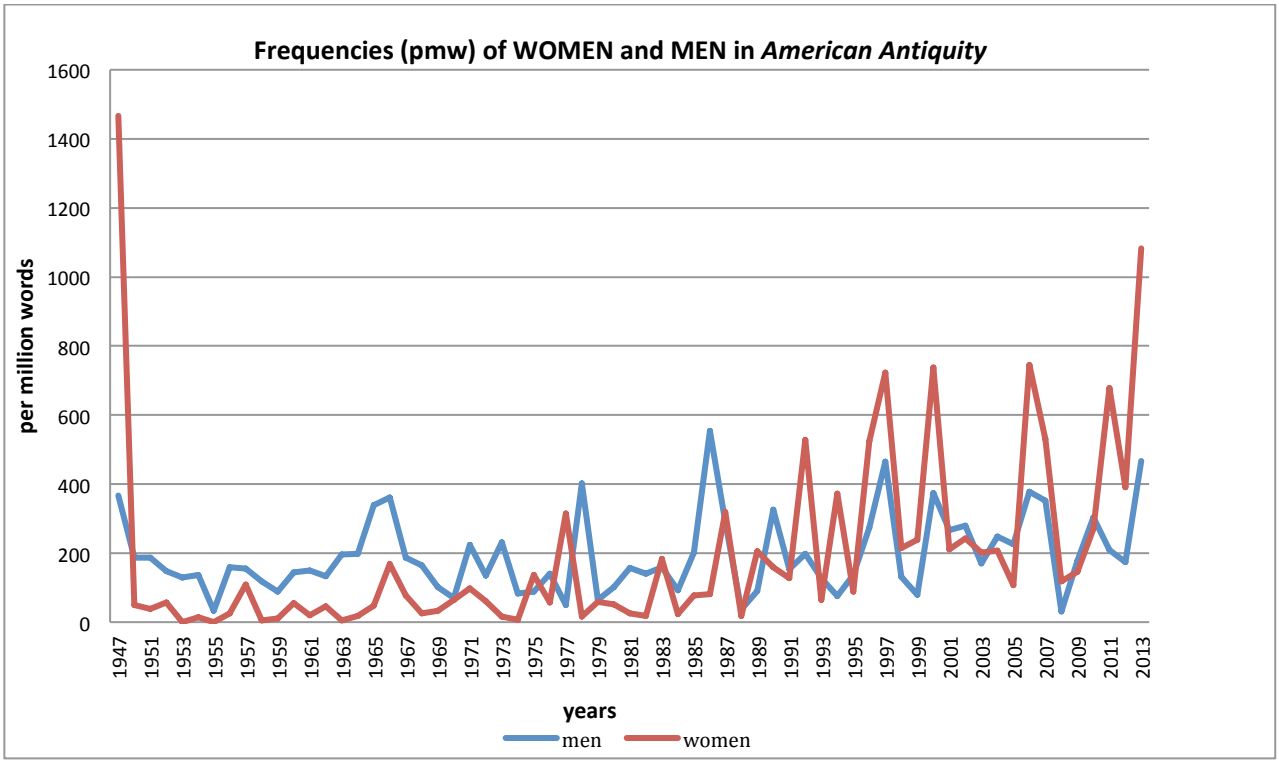

Figure 31: The proportional frequencies of WOMEN and MEN in American Antiquity

Analysing the collocates of MEN and WOMEN to tease out how they are positioned as subjects or objects in a clause and their dominant lexical patterns is crucial in determining the representation of both genders. An examination of collocation results for MEN shows that it is used typically in the syntagmatic relation of conjunction, e.g. *men and women.* In this sense, the two words form one syntactic unit, namely a noun phrase, assigning them the same semantic role in the text. Hence, men and women are represented as pluralised—this pluralisation is linguistically realised through the syntactic juxtaposition and semantic association between the two actors. In 25% of these cases, men and women are pluralized while addressing 'identification' issues. However, unlike MALE and FEMALE that occur together throughout the corpus, WOMEN appears regularly with MEN only after 1990. An underlying trend observed here is also the relative heteronormativity of these terms and their pairing.

The change in the frequency and quantity of the keyword MEN over time can be seen as an effect of the growth of feminism, and particularly its introduction into archaeology in the late 1980s. The collocations and concordance lines also reflect this change by way of theme. From the 1940s to the 1980s, the word MEN dominated throughout research articles and is used alongside adjectives and verbs in contexts describing the performance of activities, the creation of 'culture', and also men as the archaeologists themselves (see Appendix 2). In this period MEN is likely to have been used as an umbrella term for humans or people, but, in many instances, women's roles were simply ignored or invisible in the research. The collocations for MEN also reflect the changing contexts of discussion (Table 20).

Table 20: Top five collocations of MEN in AA according to MI-score and frequency, by year

MEN	1	2	3	4	5
1950	ruins (5)	history (4)	potters (3)	-	-
1954	one(3)	above (3)	-	-	-
1956	white(5)	first(4)	wintered (3)	area (3)	-
1960	days (5)	two (3)	one 93)	missing (3)	date (3)
1962	forms (3)	apparent (3)	-	-	-
1963	animals (4)	society(3)	American(3)	-	-
1965	Nambe (4)	women(4)	two(3)	men(4)	-
1966	red(30)	men(26)	black(9)	row(11)	figures(11)
1967	stature (13)	late(4)	classic(4)	Tikal(3)	population(3)
1970	years(3)	-	-	-	-
1971	female(15)	wear(5)	teeth(5)	maxillae(5)	degree (5)
1972	young (3)	women(3)	-	-	-
1977	female(23)	graves (6)	types (5)	mounds (4)	ordering (3)
1978	names(4)	female (5)	-	-	-
1979	female(7)	site(3)	cluster (3)	children (3)	-
1981	female(17)	male (8)	period (6)	deer (6)	total (4)
1982	medicine (11)	association (4)	-	-	-
1983	women(7)	two (5)	other(4)	flexed (4)	three(3)
1984	myths(6)	modern (6)	bones (6)	ancient (6)	press(4)
1985	km(17)	adult (16)	men (8)	man (7)	women (6)
1986	camp (29)	knives (21)	figure (11)	two (7)	manufacture (7)
1988	press (4)	York (3)	-	-	-
1989	adult (5)	shown (3)	-	-	-
1990	language (12)	Carib (10)	island (8)	women (7)	Luna(7)
1991	evidence(3)	-	-	-	-
1992	women (14)	percent(12)	deaf(4)	burials(3)	-
1993	women (3)	press (3)	cattle (3)	blades (3)	-

1994	women (6)	role (3)	-	-	-
1995	women (4)	European (3)	American (3)	-	-
1996	women (16)	painted (8)	designs (7)	men (6)	among (4)
1997	women (20)	painted (5)	birth (5)	two (4)	primary (4)
1998	native (16)	women (13)	Alaskan (10)	Californian (7)	-
1999	women (5)	more (3)	-	-	-
2000	mobility (19)	female (19)	logistical (17)	km (12)	average (11(
2001	women (14)	other(7)	both (4)	mourning (3)	groups(3)
2002	women (14)	men (6)	hunt (5)	higher (5)	work(4)
2003	women (17)	hunting (9)	activities (9)	goals (5)	Southwest (5)
2004	women (19)	removal (6)	activities (4)	elite (4)	work (3)
2005	women (18)	hunt (6)	work (5)	other (5)	large(5)
2006	female (30)	spirit(3)	figure (5)	signs (3)	shamans (3)
2007	women (49)	men (12)	Southwest (10)	children (10)	Prehispanic (7)
2008	ratios (4)	thousand (3)	mean (3)	isotope (3)	adult (3)
2009	female (8)	burial (4)	activities (4)	foraging (3)	adult (3)
2010	women (37)	young (8)	different (6)	between (6)	used (5)
2011	female (12)	one (7)	burials (7)	adult (7)	family(5)
2012	women (8)	young (3)	-	-	-
2013	women (55)	work (15)	men (10)	shown (13)	children (9)

The collocation data can be sorted into semantic groups similar to those for MALE and FEMALE, as listed below. The highest MI score was with *stature* (17.213). There is an additional semantic category that emerged from the collocations that is of note, where MEN occurs in relation to a range of racial or ethnic identifiers. This type of categorisation has two distinct meanings within archaeology. The first is the way human remains are labelled, such as *Kennewick Man* or cultural groups, e.g. *Aztec men,* and also in terms of biological or DNA markers. The second meaning relates to a legacy of discursive processes used to communicate and ascribe identity. The discursive categories of identity usually represent both the identities conveyed through a particular situation, as well as the more generalized categories in a given society. In America, for example, the categorisation of people based on race or ethnicity, such as 'Black', 'Asian', 'Hispanic' and 'White', is endemic; it is continually drawn upon as a source of identifying people through different types of discourse (see Echo-Hawk and Zimmerman 2006). In the data for this thesis MEN is the first label to have a significant number of racialised collocations associated with it (see Table 20 and Table 21).

1. Identification

a) Relational/kinship/binomial pair: female, women, children, family

b) Classification/human remains/burials: young, percent, graves, mounds, types, cluster, flexed, total, ratios, wear, teeth, adult, row, types, one, two, three, first, thousand, bones

c) Racial/ethnic: American, European, Nambe, Carib, York, Californian, Prehispanic, Alaskan, native, white, island, Lura, Southwest, Tikal

2. Performance: Work, ritual, society, myths, shaman, medicine, mobility, spirit, potters, activities, hunt/ing, goals, logistical, language, elite, camp, blade, knives, deer, cattle, foraging, manufacture

3. Iconography/symbolism: Figure, painted, design, red

A sample of the concordance lines provide the context for the collocated words *white men* and *native men* (Table 21), as well as the changing content around MEN over time (Table 22).

Table 21: Sample of concordance lines for MEN in AA relating to racial pre-modifiers

1956		
in 1899, these were the first white	**men**	to visit this area although he
are not considered palatable by white	**men**	Of course, some of the birds
1982		
modern relations between blacks and whites,	**men**	live may not be physically distinctive.
1993		
One elderly Indian announced that white	**men**	believed they were descended from monkeys
2000		
of trains, 'they knew that white	**men**	and women and children just like
2001		
and preferred it to all others. Native	**men**	were said to weigh
2003		
almost exclusively by white, middle-class	**men**	of European descent, socialized in cultures

Table 22: Sample of concordance lines for MEN in AA

1965		
the search in this country for Paleolithic	**men**	of antiquity comparable to those being
time the problem was taken up by	**men**	with formal anthropological training.
sculptures, markedly primitive, were carved by	**men**	who tried to reproduce human faces on
1966		
group. Houses probably were built by	**men**	not necessarily all of the
intrusive group. Through regulated diffusion,	**men**	's material culture traits or complexes
the brighter red monochrome paintings of	**men**	with bows and arrows in
1976		
the ground on the sites where	**men**	in the past did things. The
now, the basic behavioral characteristics of	**men**	and material were not different then
1978		
by male hunters or hunters and young	**men**	congregate to watch for game and to
of Man-Hours of Activities Performed by	**men**	and 2 skinning knives. In this
clear that the major area independent of	**men**	observed engaged in craft activities.
1986		
left our camp and walked to the	**men**	knives was beginning. The men's
also stay, and, most importantly, where the	**men**	's camps are constructed only
a long time. These factors ensure that	**men**	's camp or in male-activity areas
1990		
into the islands by Carib-speaking	**men**	from a homeland on the northeastern
by illness and starvation, Luna's	**men**	inched their way northward through the
for the dearth of warrior-age	**men**	among the fatalities. More than the
1996		
been recognized among hunter-gatherers:	**men**	are mobile and more commonly associated
of the historically recorded pattern of	**men**	hunting and fishing, while

with the birthing process.	**men**	rarely see human births
potters and painters. Did women or	**men**	create these spectacular designs?
2000		
of the mental processes of prehistoric	**men**	and women are within the reach
for food, makes it likely that	**men**	women, and children all participated
2005		
The distribution of the pipes reflects	**men**	of different communities interacting politically
directed at the question of why	**men**	choose to hunt large game. In

For AA, Romaine's (1999) observation on the choice of labels such as 'ladies' or 'girls' instead of 'women' can be seen most clearly in the 1970s, when the word FEMALE was used preferentially in tandem with MEN. By the 1990s WOMEN becomes the preferred choice with MEN, though it is apparent in the data that WOMEN is often tagged on after MEN for the sake of inclusiveness. Overall, and in contradiction of Romaine's argument, WOMAN is the term most frequently used to denote adult females in the corpus, and occurs at a higher rate than FEMALE, MALE, MEN or GENDER. But the changes in and around WOMEN in terms of becoming a standalone subject are very recent. This changing content is represented in collocations and concordance data (Appendix 2). The collocation data for WOMEN is shown in Table 23.

Table 23: Top five collocations of WOMEN in AA according to MI-score and frequency, by year

WOMEN	1	2	3	4	5
1950	pottery (4)	Aymara (4)	-	-	-
1957	dresses(5)	-	-	-	-
1960	figures(4)	use(3)	-	-	-
1965	men (4)	excluded (3)	-	-	-
1966	old(25)	jump (25)	buffalo (21)	layers(12)	men(3)
1967	men(4)	old(3)	jump(3)	buffalo (3)	-
1969	children (3)	-	-	-	-
1970	men(6)	both(4)	-	-	-
1971	men (5)	children(3)	-	-	-
1972	men (5)	-	-	-	-
1976	children(3)	-	-	-	-
1977	some (46)	two(23)	one (23)	tomb (22)	three (22)
1979	men (3)	-	-	-	-
1980	Arawak (3)	-	-	-	-
1983	men(7)	royal(6)	two (3)	classic (3)	-

1986	men(6)	six (4)	archaeology (3)	-	-
1987	Iroquois (10)	children (10)	men (9)	household (8)	young (5)
1989	women(8)	lactating (8)	shown(5)	older (5)	young(4)
1990	men(7)	young (5)	language(5)	-	-
1991	minorities(4)	ethnic(4)	-	-	-
1992	archaeology (20)	percent (18)	prehistory(15)	gender (15)	men (14)
1993	prehistory (17)	archaeology (15)	men (3)	engendering (3)	-
1994	prehistory (17)	archaeology (15)	engendering (12)	production (7)	men (6)
1995	native (4)	men (4)	-	-	-
1996	men(16)	archaeology (13)	prehistory (12)	engendering (11)	Indian (10)
1997	men (20)	women(12)	prehistory(11)	roles(10)	meat (8)
1998	Native (29)	Californian(20)	Alaskan(10)	households (5)	identities (4)
1999	role (8)	men (5)	plant (4)	time (3)	gourds(3)
2000	men (43)	children (19)	women (14)	other (13)	activities (13)
2001	men (14)	groups (9)	work (5)	prehistory (5)	related (4)
2002	men (14)	children(5)	small (4)	two (3)	tool (3)
2003	men (17)	archaeology (14)	prehistory (10)	women (8)	engendering (7)
2004	men (19)	food(4)	work(3)	game(3)	children(3)
2005	men (18)	work (3)	middle (3)	archaic(3)	-
2006	men (56)	pueblo(12)	women (12)	ritual (11)	activities(7)
2007	men (49)	children (28)	prehistory (16)	archaeology(15)	women(14)
2008	role (6)	men (6)	engendering (5)	children (5)	archaeology (5)
2009	men (20)	children(5)	hunting (4)	hunt (4)	young (3)
2010	men (37)	children (7)	different(5)	used (5)	community(4)
2011	rockshelters (18)	retreats(13)	social(10)	men (10)	weaving(6)
2012	men (8)	pottery (7)	work (6)	women (6)	exchange (5)
2013	men (55)	women (32)	work (24)	percent(15)	shown (20)

The collocation results for WOMEN also show the racialisation of pre-modifying nouns, although the frequency is considerably less than for MEN. The 'discipline' category reoccurred and, like GENDER, was used to denote a theme or sub-disciplinary topic, such as in '*women* in *archaeology'* or '*archaeology* of *women'* and '*women* in *prehistory*'.

1. Identification:

a) Relational/kinship/binomial pair: children, men, women, community, household

b) Classification/human remains/burials: old, older, young, tomb, percent, figure

c) Racial/ethnic: Arawak, Iroquois, Aymara, Indian, Californian, Alaskan, Pueblo, native, ethnic

2. Performance: pottery, weaving, game, ritual, activities, hunting, food, work, meat, plant, tool, exchange, engendering, royal, dresses, jump, roles, language

3. Discipline: archaeology, prehistory, classic

A point of difference between the collocations for WOMEN and MEN is that MEN is attributively pre-modified by *young*. However, WOMEN is additionally pre-modified by *old*. The use of this adjective with WOMEN juxtaposed with its absence with MEN suggests a more pejorative description of WOMEN. The differences in the description of race and age of men and women raises the issue of description in AA: are there differences? This information was not discernible from the summary collocation data, thus the concordance lines for both MEN and WOMEN (Appendix 2) were examined and all adjectives compiled. Across AA, adjectives were used less with WOMEN than MEN, with WOMEN occurring more with conjunctions such as 'the'. The adjectives describing MEN are generally more positive and relate to prestige, status and occupation. The adjectives for WOMEN relate more to reproductive and marital status.

1947-1960

men: *able-bodied, bearded, conquered, converted, modern, early, cave, stalwart-young, younger*

women: *old, beautiful, married*

1960-1970

men: *old, young, sensible, leading, white, dressed, field*

women: *older, old, pregnant, unmarried, surviving*

1970-1980

men: *young, older, creative, medical, uncircumcised, experienced, holy, dancing, middle, able-bodied, early, prehistoric*

women: *young, old, captive*

1980-1990
men: *old, older, dead, young, younger, big, lesser, white, polygynous, ancestral, elite, rich, prominent, brave, civilized, marginal, medicine*

women: *young, old, older, elderly, settled, royal, unmarried, married, non-pregnant, pregnant, post-partum, peasant, lactating, unattached*

1990-2000
men: *elderly, middle aged, Western, white, native, deaf, mounted, religious*

women: *young, healthy, post-menopausal, native, menstruating, anaemic, captured, prehistoric*

2000-2013
men: *older, young, high status, elite, big, great, leading, chief, junior, initiated, enslaved, mature, single, unmarried, hunting, native, foreign, migrant, sacrificial, , high ranked, enlisted, white*

women: *married, unmarried, older, elder, younger, black, white, non-Western, enslaved, slave, indigenous, menstruating, pregnant, nude, hyper-sexualised, clothed, topless, ancient, prehistoric, elite, knowledgeable, urban*

In terms of the research questions, it is worthwhile examining the use of WOMEN in parallel with WOMAN. WOMEN occurs at a far higher rate than WOMAN in AA, with an average rate of 211.1 pmw compared to 76.8 pmw. Overall, WOMAN has one of the lowest frequency rates in the entire corpus. There are obvious differences in usage when compared to MAN, where MAN has been used generically to refer to humans, but WOMAN refers to a singular person and never to humans in general. The collocation data (Table 24) and their semantic groupings expose how a singular woman is discussed in AA.

Table 24: Top five collocations of WOMAN in AA according to MI-score and frequency, by year

WOMAN	1	2	3	4	5
1951	pins (3)	paints (3)	appropriate (3)	-	-
1959	occupation(9)	remains (7)	southwest (5)	skull (5)	skeletal (5)
1961	title(8)	black(4)	relationship(3)	emblem(3)	bat(3)
1968	shell(8)	white (3)	-	-	-
1977	Tikal(19)	husband(13)	nose (6)	son(4)	ruling(4)
1983	women(4)	Tikal(4)	royal(3)	-	-

1986	old(32)	myth (13)	snake (13)	mother (13)	serpent(7)
1987	pregnant(3)	-	-	-	-
1989	adult (4)	occupation(3)	new (3)	man (3)	-
1996	gatherer (5)	status(4)	hunter (3)	-	-
1997	hunter(4)	hunting (4)	gatherer(3)	describes (3)	Chipewyan(3)
1998	burial(4)	paleoindian (3)	-	-	-
1999	creek (17)	Gordon(14)	man (6)	years (3)	burial (3)
2000	man (5)	female(5)	one (3)	bird (3)	-
2001	Gordon (8)	creek(8)	man(7)	remains (3)	-
2002	hut (6)	-	-	-	-
2003	creek(18)	Gordon (15)	man(6)	cave (3)	analysis(3)
2004	sand (10)	man(3)	figure (3)	animal (3)	-
2006	man(3)	-	-	-	-
2010	remains (4)	articulated (3)			

1. Identification:

a) Relational/kinship/binomial pair: man, husband son, mother, relationship

b) Classification/human remains/burials*:* remains, skull, skeletal, burial, old, adult, pregnant, articulated, one, analysis

c) Racial/ethnic: Tikal. Gordon, PaleoIndian, Southwest, Chipewyan

2. Performance: hunter, gatherer, status, hunting, ruling

3. Iconography/symbolism: figure, paints, design, white, black, nose, snake, serpent, pins, myth, emblem, describes, bat, animal, cave, sand, creek, hut, shell

These results show that WOMAN is most often used to refer to a single female identified in an image, symbol, mythology/story, artefact or burial. The word 'gatherer' scored quite low with WOMAN and only in 1996 and 1997, even though it was expected that there would more occurrences of the phrase 'woman the gatherer' in reference to both the seminal work in the area and as a topic analysed by feminist archaeologists. The highest MI score was with *husband* (23.42) and most often with MAN. This basic level collocation frequency can perhaps best be displayed as a word cloud (Figure 32).

Figure 32: Word cloud of total collocations of WOMAN in *American Antiquity*

7.4.6 The use of MAN, HUMAN and PEOPLE in AA

The editors of AA advocated the change from using MAN as a term referring to all humans to gender-neutral language in mid-1973. This followed the American Anthropological Association's (1973) statement discouraging the use of male third-person pronouns and the use of generic 'man' in reference to non-sex-specific semantic categories in favor of 'one', 'person', 'humans', 'humankind' and 'they' (AA style guidelines 2017). The adoption of this change is reflected in the data by an increased uptake of the keyword HUMAN in 1974 and 1977 (Figure 33). This is in tandem with a

decline in the frequency of MAN in 1974 and 1975, although it then rose to a peak of 1343 pmw in 1977 (the highest score for MAN in AA). Figure 33 demonstrates that there is a relationship between an increase in frequency (pmw) of HUMAN (and to a lesser extent PEOPLE) and a decrease in the frequency of MAN. This indicates that MAN has been used generically to mean humans and/or people, as well as to describe one male person. This change is clear before and after 1981, where MAN is the most frequently used term before this date, and then after 1981 both PEOPLE and HUMAN occur at three to five times the rate. Overall, the rate for MAN is in the 200 to 400 pmw band, at an average of 370 pmw across the corpus, and a ratio of MAN: WOMAN of approximately 8:1.

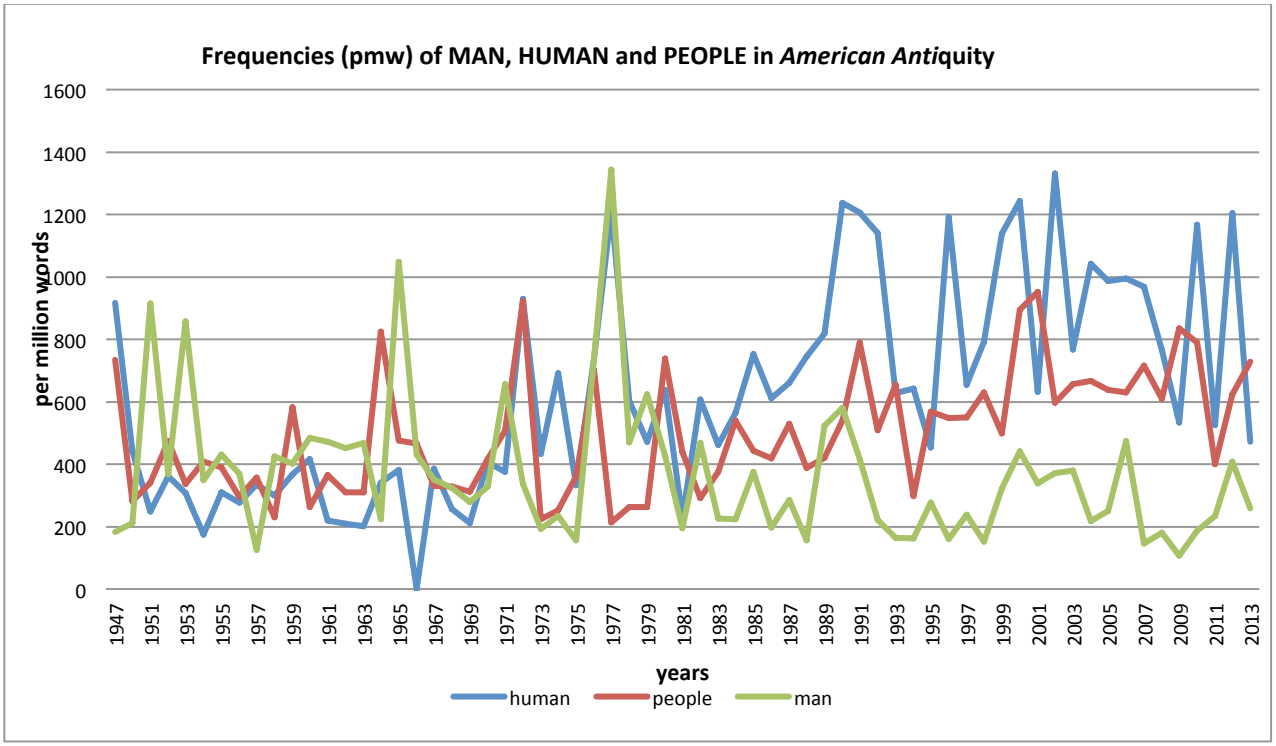

Figure 33: The proportional frequencies of MAN, HUMAN and PEOPLE in *American Antiquity*

In terms of PEOPLE and HUMAN, PEOPLE also occurs at a higher rate than HUMAN until 1982, after which HUMAN occurs at a higher frequency in all but three years to 2013. Overall, MAN is the keyword used at the highest rate of the three in AA, with 1343 pmw in 1977. As expected, MAN was used in AA to denote humans (a common pattern across the English language until recent decades) and collocations and concordance results

only confirm this. What they can also add, however, is insight into the nuanced differences in how the three keywords are used. The results most pertinent to gender theory are explored through comparison of the collocation data below.

Table 25: Top five collocations of MAN in AA according to MI-score and frequency, by year

MAN	1	2	3	4	5
1950	early (14)	localities (9)	index (9)	America (9)	series (5)
1951	early(57)	America (21)	north (20)	site (18)	sites (16)
1952	early(20)	America (11)	north(10)	site(6)	sites(5)
1953	early(34)	America (23)	north(19)	man (12)	American (12)
1954	early(13)	America (7)	Minnesota(4)	white(3)	university(3)
1955	early(18)	America (9)	north(8)	sites(6)	university(5)
1956	early(8)	America (6)	primitive (5)	site(4)	seated(3)
1957	America (15)	north(13)	mastodon (13)	early(10)	evidence (9)
1958	early(8)	American (5)	upper (4)	social (4)	characteristic (4)
1959	early(8)	America (10)	north(8)	California (7)	Pleistocene (4)
1960	early(8)	days (11)	America (7)	north(8)	new(3)
1961	early(8)	America (11)	north(6)	Deville (5)	site (4)
1963	early(8)	America (11)	plains(6)	prehistoric (5)	north (5)
1964	early(8)	north-eastern(3)	culture(3)	climate (3)	-
1965	early(63)	America (41)	studies (22)	antiquity (18)	outline(13)
1966	early(42)	America (13)	north(12)	great (9)	utilization(7)
1967	early(8)	San Diego (11)	new (11)	prehistoric (3)	world (6)
1968	early(8)	new (7)	world(6)	made (5)	hours (5)
1969	early(17)	site (10)	phase(6)	north(6)	California(5)
1970	early(34)	world (6)	new(6)	been(6)	adaptation (5)
1971	made(17)	early(9)	studies(7)	one(6)	man (6)
1972	prehistoric(4)	new (4)	hunter(4)	great(4)	year(3)
1973	dangerous(3)	-	-	-	-
1974	hunter (4)	social(3)	settlement (3)	Richards(3)	history (3)
1977	southeast(15)	relationships (7)	land(6)	prehistoric(6)	nose (6)
1978	culture(6)	activity (6)	use(5)	game (5)	area(5)
1979	early(36)	north (14)	man (14)	America(11)	new(10)
1980	world(6)	geological (5)	fossil (5)	background (5)	settlement (4)
1981	early(5)	deer (4)	Richard(3)	prehistoric (3)	new (3)
1982	man(14)	figure(8)	types(6)	rich (6)	poor (6)
1983	man (6)	archaeological(4)	western (3)	survey (3)	rich(3)
1984	early(42)	archaeology (6)	-	-	-
1985	national(29)	early (25)	-	-	-
1986	fish(5)	figure (5)	shows (4)	hunter(4)	two(3)
1987	national(11)	-	-	-	-

1988	early(10)	-	-	-	-
1989	early(49)	America (28)	new(17)	-	-
1990	early(34)	America (33)	south (22)	age (15)	glacial(14)
1991	antiquity(9)	early (7)	pelvis(4)	hunter(4)	-
1992	big(7)	lindow (4)	adaptation(4)	science (3)	human (3)
1993	early(5)	york (3)	study(3)	new (3)	-
1995	impact(11)	climates (9)	northeast(6)	national(4)	settlement(5)
1996	new (5)	world (3)	prehistoric(3)	great(3)	early (3)
1997	ceramics(6)	painted(5)	Chipewyan(5)	aboriginal(3)	birthing(3)
1998	early(8)	great(3)	-	-	-
1999	early(10)	woman(6)	anthropology (6)	new (5)	Gordoncreek (5)
2000	old (10)	early(12)	big(12)	man(10)	beta (10)
2001	Kennewick(20)	woman(7)	senior(3)	hunter(6)	Gordoncreek(3)
2002	big(8)	societies (6)	point(5)	hut (5)	great(5)
2003	museum(11)	spirit (9)	figure (9)	cave(9)	early(8)
2004	shaping(6)	role (6)	york (3)	woman (3)	southern (3)
2005	northeast(9)	prehistoric(6)	Hopi(3)	middle (3)	man (4)
2006	women(56)	southwest(9)	prehispanic(8)	gender(7)	ritual (6)
2007	lands(5)	cave(4)	old (3)	young (3)	-
2008	early(15)	archaeology (6)	world(5)	-	-
2009	America(7)	man (6)	early (6)	big (6)	house(4)
2010	early(14)	man (8)	-	-	-
2011	woman(3)	teeth (3)	permission(3)	animal (3)	york(3)
2012	old(3)	older(3)	bone(3)	medicine(3)	every (3)
2013	practices(6)	state (5)	resource(5)	new(5)	hunter (5)

Table 25 shows that, overwhelmingly, MAN is *not* used as the binomial pair of WOMAN, despite the reverse results for WOMAN. The collocations for MAN confirm '*early*' is used most often, with the highest MI scores being with both '*succession*' and '*rulers*' (16.02). There is a change in context apparent from these collocations, particularly after the mid-1990s.

The collocation results for PEOPLE and HUMAN (Tables 26 and 27; for concordances see Appendix 2) demonstrate no significant correlation with the theme of gender, or with other keywords. The trends that emerge from the results show that, over time, HUMAN is used as a noun modifying other nouns, around who humans 'are' and where they are 'from'. There are a high number of words in the 'identifiers' group, and most discussion is around remains, burial data and evolution. There is a change in focus to the theme of

'human *behavior*' from the 1970s, (although not in terms of gendered behaviour) and an increase in terms such as *remains, ecology* and *isotope*, reflecting broader scientific influences. PEOPLE, in contrast, is used most often as a noun preceding a verb, and in the context of what 'people do' as well as particular cultural groupings, e.g. Pueblo people, which is used more often after 2000. The highest MI scores for HUMAN was *ecology* (16.0), and *lineage* for PEOPLE (14.1).

Table 26: Top five collocations of HUMAN in AA according to MI-score and frequency, by year

HUMAN	1	2	3	4	5
1950	bone (3)	effigies (3)	illustrated (3)	questionable (3)	skulls (3)
1951	bones(6)	figurines (5)	burial (24)	two (3)	skeleton (3)
1952	skeletal(12)	remains (9)	material(8)	bones(7)	mound(6)
1953	skull(10)	bones(7)	fragmentary(6)	bone(6)	fossil (5)
1954	occupation(5)	raised (3)	face(3)	-	-
1955	occupation(5)	scattered (4)	bones(4)	animal(4)	molded(3)
1956	remains (5)	face(5)	skeletons (3)	valley(3)	skeletal(3)
1957	artifacts (5)	remains(4)	agency (4)	early(10)	evidence (9)
1958	remains(5)	bones(5)	situation (4)	occupation (4)	life(4)
1960	bone(9)	remains(8)	burial (7)	heads(6)	one(5)
1961	occupation(7)	bone(6)	sand(3)	remains(3)	found (3)
1962	found(6)	bone(6)	occupation(5)	shell(4)	skeletal(3)
1963	skull(4)	fragments(4)	ecology(4)	bone(4)	remains(3)
1964	samples(6)	prehistoric (6)	origin(4)	bone (5)	counts(4)
1965	figurines(8)	remains(9)	occupation(5)	head(4)	effigies(4)
1966	figures (50)	figure (11)	animal (10)	face (9)	black(8)
1967	stature(4)	shell(4)	river(4)	lived (4)	Fremont(4)
1968	figures (6)	teeth(4)	occupation(4)	objects (4)	face (4)
1969	bones (5)	occupation (4)	behavior(4)	activity (4)	remains (3)
1970	skeletal(5)	femurs (5)	theory(4)	south(4)	pollen(4)
1971	behavior(13)	studies (5)	understanding(4)	dentition(4)	dental (4)
1972	populations(24)	population(19)	density (10)	behaviour(6)	wild (6)
1973	behavior(8)	prehistoric (6)	lifeways(5)	past(4)	specific(3)
1974	coprolites(33)	pollen(18)	analysis (18)	prehistoric(10)	population (9)
1975	coprolites(5)	social(3)	settlement (3)	Richards(3)	history (3)
1977	ecology(48)	valley (36)	human(29)	prehistoric(11)	great (8)
1978	behavior(26)	populations(5)	culture(5)	past (4)	occupation(4)
1979	behavior(13)	ecology(10)	study(9)	prehistoric(6)	occupation(7)
1980	behavior(12)	past (6)	environments (5)	bone(5)	activity(5)

1981	ecology(7)	sacrifice(4)	human(4)	skeletal (3)	shell (3)
1982	evolution(7)	ecology(7)	anaysis(7)	social (6)	geography(6)
1983	behavior(10)	populations(9)	adaptation (8)	evolution (7)	ecology(7)
1984	remains(9)	evolution (9)	beings(9)	past (7)	behavior(7)
1985	behavior(17)	gould(14)	population (13)	occupation (8)	culture(8)
1986	bone(10)	remains (7)	skeletal (6)	populations(6)	collagen(6)
1987	plant(22)	behavior (19)	population (18)	niche (14)	expression(11)
1988	remains(31)	behavior (15)	impact(13)	American(10)	population(8)
1989	evolution(14)	occupation (12)	populations(11)	population(11)	demographic(11)
1990	diet(24)	bone (23)	beings(15)	remains (14)	pueblo(14)
1991	behavior(14)	bones (10)	bone(10)	California(9)	remains (8)
1992	remains(13)	parasite (6)	evolution(12)	behavior (11)	understand (6)
1993	groups(11)	societies (8)	ecology(7)	behavior (7)	variability (4)
1994	bone(21)	zinc (12)	evolution(12)	analysis(7)	prehistoric(6)
1995	bone(22)	remains (14)	diet(9)	human(8)	collagen (8)
1996	behavior(21)	human(14)	evidence(11)	remains(10)	hair(10)
1997	remains(10)	figure(10)	evolution (7)	social (6)	bone(5)
1999	behavior(25)	occupation(23)	remains(19)	age(9)	skeletal (14)
2000	remains(83)	history(23)	disarticulated (22)	evidence(17)	analysis (12)
2001	remains(18)	occupation(13)	evidence(11)	food(9)	social(8)
2002	remains(64)	behavior(25)	skeletal(17)	ecology (15)	rock(15)
2003	remains(34)	population(16)	evolution (14)	ecology(14)	behavior(14)
2004	behavior(22)	hunting (20)	social(14)	ecology (14)	remains (12)
2005	bone(20)	remains(22)	ecology(18)	interaction(16)	scale (15)
2006	remains(71)	American(19)	study(17)	scientific(12)	native (14)
2007	human(70)	bone(39)	long (26)	behavior (26)	remains (23)
2008	remains(31)	evolution (24)	human(20)	coprolite (5)	skeletal (3)
2009	evolution (19)	hunting (16)	ecology (14)	prey (12)	human(6)
2010	remains(58)	bone (32)	human (13)	evolution (22)	behavior (17)
2011	remains(32)	bone (10)	samples(9)	prehistoric(9)	isotope(7)
2012	shark(12)	remains(20)	relationships(18)	mortuary(17)	pleistocene (16)
2013	remains(29)	ecology (13)	behavior(9)	cremated(7)	isotope(6)

Table 27: Top five collocations of PEOPLE in AA according to MI-score and frequency, by year

PEOPLE	1	2	3	4	5
1950	island (5)	tempered(4)	pueblo (3)	many (3)	fiber (3)
1951	woodland(3)	Wisconsin (3)	time (3)	Pre-ceramic (3)	oak (3)
1952	early(5)	culture (4)	villages(3)	pottery(3)	living(3)
1953	living(4)	used (3)	time(3)	one (3)	new (3)
1954	village (7)	rock (7)	culture(5)	one(3)	focus(3)
1955	speaking(6)	culture (5)	old(4)	between(4)	area(4)
1956	time (4)	one(4)	group (3)	certain(3)	-
1957	pottery(4)	made(4)	serpent (3)	occupied(3)	culture(3)
1958	culture(5)	hunting (4)	time (3)	middle(3)	-
1959	archaic(11)	specialized (7)	culture(6)	made(5)	groups (4)
1960	Fremont(6)	many (4)	occupied (3)	-	-
1961	made(4)	culture (4)	years(3)	name (3)	many(3)
1962	group(7)	pueblo (4)	present(4)	made (4)	day (4)
1963	culture(5)	groups (4)	group(4)	contact(3)	-
1964	people(18)	occupied (8)	lived (8)	pueblo (3)	pueblos(3)
1965	time(4)	southern (4)	south(4)	river (4)	pioneer(4)
1966	area(7)	north (6)	pueblo (5)	prehistoric (5)	clovis(5)
1967	stature(4)	shell(4)	river(4)	pottery (4)	lived(4)
1968	made(4)	lived (4)	one(3)	living(3)	early(3)
1969	group(4)	mountain (3)	-	-	-
1970	group(6)	two(4)	groups(4)	three(3)	thirty(3)
1971	culture(5)	stone (4)	site(4)	one(4)	western(3)
1972	pattern(9)	house (9)	people (8)	average (8)	number (7)
1973	groups(4)	number(3)	-	-	-
1974	members(44)	other (23)	work(22)	several(22)	ruling(22)
1975	same(4)	water (3)	use(5)	game (5)	area(5)
1977	early(36)	north (14)	man (14)	America(11)	new(10)
1978	real(3)	number(3)	-	-	-
1979	groups(5)	period(3)	living(3)	important (3)	areas (3)
1980	population(10)	one(10)	group(8)	prehistoric (6)	native (6)
1981	palace (5)	fed(5)	thousands (4)	supported (3)	over(3)
1982	york(3)	time (3)	-	-	-
1983	number(4)	Navajo (4)	different (4)	Woodland (3)	things(3)
1984	years(5)	groups (5)	time (4)	large(4)	population(3)
1985	interested(6)	records (4)	Gulf (4)	archaeology (4)	working (4)
1986	sedentary(4)	prehistoric (4)	numbers (4)	among (4)	mother (3)
1987	settlement(7)	living (7)	pit(6)	people (6)	structures (5)
1988	room(6)	living (6)	number (5)	population(4)	numbers(4)
1989	first(19)	America (19)	north(16)	know(16)	sharing (4)
1990	people(12)	kill (6)	evolution (6)	divergent (6)	conquered (5)
1991	died(6)	number (5)	prehistoric(4)	large (4)	world (3)
1992	groups(7)	plan (6)	other(6)	practices(4)	methods(4)
1993	culture (13)	contact(7)	history(6)	arctic(5)	Europe (4)

1994	carry(8)	valley(5)	living(5)	tools(4)	artifacts(4)
1995	status(6)	social(6)	moundville (6)	food (6)	world(5)
1996	artifacts(11)	social(9)	between (6)	studies (5)	relationships (5)
1997	people(22)	artifact(19)	groups(9)	other(8)	one (6)
1998	bay(15)	other(7)	living(7)	use(5)	interaction(5)
1999	Aboriginal(25)	archaeological(8)	knowledgeable (5)	control (5)	archaeology(5)
2000	first(9)	relations (8)	social (7)	ancient (7)	people(6)
2001	buried(22)	period (17)	beads (14)	cemetery (11)	some (10)
2002	phase(7)	old(7)	river(6)	middle (3)	man (4)
2003	indigenous(13)	large(11)	practices(8)	time(5)	first (5)
2004	Hopi(18)	large (9)	animals(3)	time (3)	studies (3)
2005	indigenous(35)	many (9)	traded(8)	other (8)	colonial (7)
2006	north(8)	living(8)	ate (7)	culture (6)	coast(6)
2007	pueblo(17)	Anasazi (10)	pottery (9)	lived (9)	built (8)
2008	indigenous(19)	proceedings (8)	origins(8)	north(8)	American(8)
2009	Cahokia (19)	pots(14)	living(9)	household(9)	used (8)
2010	indigenous(35)	archaeology(16)	native(8)	new(5)	hunter (5)
2011	social(10)	mission (6)	groups (6)	cultural (6)	other (6)
2012	wolf(9)	pots (7)	north(7)	clovis(7)	American(7)
2013	other(12)	native(10)	percent (5)	images(5)	time (6)

7.4.7 The Use of Children and Family in AA

An interesting subset of gender-related terms consists of the word CHILDREN, a so-called epicene term that does not actually specify the gender of the subject, although it may still indicate gender bias (Norberg 2002; Wallin-Ashcroft 2000). Furthermore, this bias is not always stable over time, but can shift from gender-neutral to biased, or vice versa. The aim of this section is to discern whether CHILDREN and FAMILY are associated with gender (or indeed, gender bias) in AA, as has been demonstrated in studies in other in the social sciences (Norberg 2002).

In terms of frequency, CHILDREN and FAMILY both occur more often than woman, masculine, feminine, male, female and sex across the corpus. Figure 34 displays the relationship between the words and their rates across time. One outlying result for CHILDREN—4402 pmw in 1947—was excluded from the graph as it affected the scale to such an extent that other detail was obscured. This peak was ten times greater than the

next highest score of 414 pmw, and well above the average frequency rate of approximately 80 pmw. The peaks in use for CHILDREN occur between 1990 and 2000, and there is some relationship to increased rates of CHILDREN and FAMILY together in the years 1972, 1987, 1997 and 2000. The results for FAMILY are also characterised by a series of peaks and troughs, with a null value in 1991 and a high of 427 in 1972. Overall. FAMILY shows an increasing trend across time.

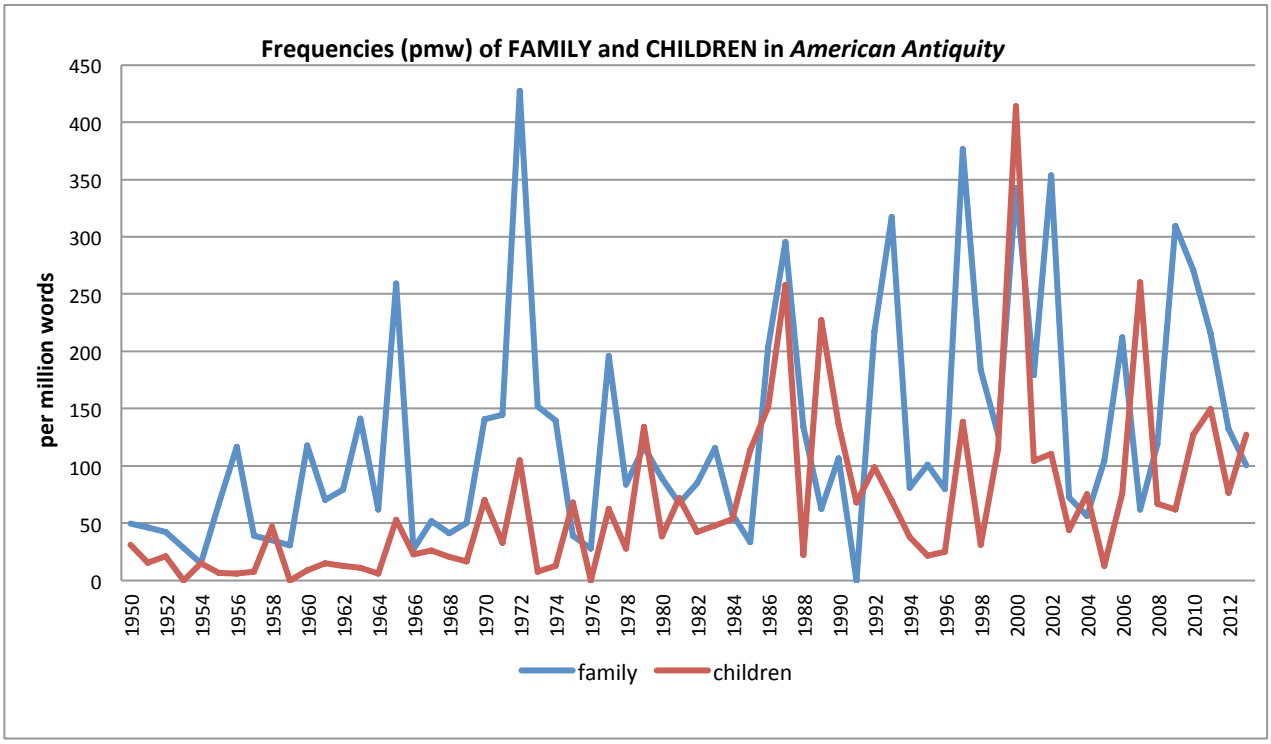

Figure 34: The proportional frequencies of FAMILY and CHILDREN in American Antiquity

The collocations for CHILDREN are summarised in Table 28 below.

Table 28: Top five collocations of CHILDREN in AA according to MI-score and frequency, by year

CHILDREN	1	2	3	4	5
1947	made (7)	work(5)	toys (4)	Navaho (3)	miniature (3)
1965	unit(3)	-	-	-	-
1966	women(3)	-	-	-	-
1967	years(3)	-	-	-	-
1969	women(3)	-	-	-	-
1970	two(3)	-	-	-	-
1971	women(3)	-	-	-	-
1972	average(4)	people(3)	-	-	-
1975	four(3)	-	-	-	-
1977	Infants(15)	some (7)	adults(6)	burials(3)	-

1979	cluster(14)	adults (14)	children (10)	female (5)	male (3)
1981	play(6)	-	-	-	-
1984	time(3)	-	-	-	-
1985	burial(6)	three (5)	females(4)	adults(5)	adolescents(5)
1986	associated(4)	childbirth (3)	-	-	-
1987	women(10)	young(9)	number(5)	infants (5)	four(5)
1989	older(8)	male (8)	female (8)	children (8)	younger(4)
1990	warriors(4)	-	-	-	-
1992	two(4)	four(4)	graves(4)	-	-
1993	four (3)	five (3)	-	-	-
1997	range(5)	women(4)	school(4)	number (4)	woman(3)
1998	adults(5)	vessels(4)	-	-	-
2000	women (19)	young (16)	food (14)	age (14)	foraging(12)
2001	beads (5)	buried(4)	adults(4)	burial(3)	-
2002	women(5)	inherited (5)	men (3)	-	-
2003	young (3)	-	-	-	-
2004	women(3)	-	-	-	-
2006	play(3)	-	-	-	-
2007	women(28)	men (10)	Southwest (6)	prehistoric (6)	pottery (5)
2008	women(5)	adults (4)	young (3)	adulthood (3)	-
2009	women(5)	men (5)			
2010	women(7)	men (5)	young (4)	one (4)	Pueblo (3)
2011	women(4)	adults (4)	range (3)	percent (3)	four (3)
2012	males (3)	adult (3)	-	-	-
2013	women(12)	men (9)	reach (5)	older (5)	shown(5)

The word CHILDREN occurs most frequently with WOMEN, and thus the two are seen as one syntactic unit (a noun phrase) and play the same semantic role in the text. Similarly, MEN, when occurring at the same frequency as WOMEN and as a collocation, is one semantic unit, as in 'men, women and children'. The highest MI score for CHILDREN was with *infant* (17.69). The emergent categories primarily concern 'identification' and the 'classification' of human remains (*male, female, buried, percent* and numerals), with only minor occurrences indicating performance: *made, work, toys, foraging, play, school, warrior.* CHILDREN also occurs with relationship and kinship terms: *adults, infants, adolescents, men, women*, and also *younger, older*. A sample of the concordance lines for CHILDREN and WOMEN warranted further exploration as to how the unit 'women and children' is used in context.

Table 29: Concordance lines for CHILDREN in AA relating to WOMEN

1966		
affiliation indicated. Women and unmarried	**children**	on the other hand, are almost
and the surviving women and small	**children**	were taken to several western
not indicate solely women and small	**children**	Ethnic groups living to the
1971		
and is never shown to women,	**children**	or uncircumcised men. It is the
event. Under no circumstances should women	**children**	or uncircumcised men ever see these
a safe distance from women and	**children**	Sometimes an untrimmed piece of
1987		
said that Huron women had fewer	**children**	than did French women
that Iroquois women regularly nursed their	**children**	for three years, though
individuals in war, especially women and	**children**	Women would exhort their
2000		
occupied in common by women and	**children**	as a separate category does not
the place, the women, and the	**children**	and women who were housed there
of at least 486 men, women, and	**children**	were systematically dismembered
2007		
he responsibility of women and	**children**	to tend the crops from
more men than women and	**children**	are killed in warfare
burials, and high proportions of	**children**	as well as women are

Overall, the concordance lines for children indicate they are most often seen as an extension of, or as dependents on, women and/or the extended kinship group. The age of what constitutes a child is unclear, and no doubt depends on the view of the author(s) and the culture and time frame described. Discussion of how children learn gender-related tasks and become 'gendered' adults is absent, but there are six papers that describe children with agency in terms of performing or learning tasks such as making pottery and food gathering. In this sense there is some 'gendering' of children by task, as shown in the concordance lines below (Table 30).

Table 30: Concordance lines for CHILDREN in AA

1947		
informants volunteered the fact that	**children**	made animals out of mud
vessels are doubtless the work of	**children**	who were imitating their mothers
canyon who still made pottery. The	**children**	who made the miniature clay vessels
1981		
the proper consumption of tortillas by	**children**	of various ages is shown.
perturbation of artifact distribution by	**children**	's play
Under systems of ascribed status	**children**	and, to a lesser extent, women
1998		
mandatory schooling for grade-school-age	**children**	as early as the late nineteenth
busy raising younger children, older	**children**	camped during
weighted in the play activities of	**children**	suffered from iron deficiency
2007		
feature of teaching frameworks for	**children**	learning to make pottery.
most non state pottery-producing societies,	**children**	learn to decorate pottery
system. The presence of young	**children**	in high-status graves is

For the word FAMILY, it was important to examine the collocations in terms of its roles and the assumptions around the nuclear family, a model prevalent in modern American society. Table 31 below reveals the trends over time. In terms of the word 'nuclear', this declines significantly after 1987, and overall, there are changes in how FAMILY is described or interrogated after 1990. The highest MI score occurred with the words *parties* and *sized* (17.25). The primary content on FAMILY, therefore, concerns its size and structure, and as a unit of production. These have wider implications in terms of gender, as discussed in the analysis chapter.

Table 31: Top five collocations of FAMILY in AA according to MI-score and frequency, by year

FAMILY	1	2	3	4	5
1950	toasting (4)	tins(3)	jugs (3)	gasoline (3)	-
1951	rose(3)	-	-	-	-
1953	groups(4)	-	-	-	-
1955	species (4)	type(3)	name (3)	-	-
1956	permanently(6)	mud (6)	one (3)	simple (3)	resident(3)
1960	five(3)	support (4)	heads(4)	-	-

1961	member(3)	-	-	-	-
1963	other(3)	order(3)	-	-	-
1965	extended(12)	nuclear (11)	unit (6)	one (6)	matrilocal(5)
1967	nuclear(3)	extended (3)	-	-	-
1968	small(4)	-	-	-	-
1970	members(6)	occupied (4)	family(4)	each(3)	extended (3)
1971	snake(7)	family(3)	nuclear (5)	unit (4)	type(4)
1972	nuclear(14)	single (7)	extended(6)	size(5)	type(5)
1973	residence (3)	-	-	-	-
1974	nuclear(11)	band (7)	minimum(6)	one (5)	language (4)
1977	sized(6)	collecting (6)	plant(3)	groups(3)	temporary(3)
1978	units (3)	lines(3)	-	-	-
1979	nuclear(3)	-	-	-	-
1980	Aztecan (3)	-	-	-	-
1981	ruling(4)	royal(3)	members(3)	-	-
1982	altar(3)	-	-	-	-
1983	nuclear(6)	includes (3)	-	-	-
1986	Mississippian(3)	size (3)	structure (3)	single(3)	-
1987	nuclear(10)	men(6)	members(6)	women(6)	west(5)
1989	land(3)	household(3)	-	-	-
1990	groups (6)	-	-	-	-
1992	weir(17)	cemetery (8)	status(6)	members(5)	virginia(5)
1993	front(32)	Region(31)	back (20)	communal(9)	internal(9)
1994	Summer (3)	State (3)	-	-	-
1995	single (3)	extended(3)	-	-	-
1996	Identified (3)	-	-	-	-
1997	level(12)	labor(10)	markers(7)	projects(7)	community(7)
1998	Streams (8)	Forest(7)	Rivers (6)	Jackson(4)	Turtle(4)
1999	groups(6)	small(5)	one(5)	sizes(4)	land(3)
2000	extended (16)	production (10)	form(7)	labor(7)	communal(7)
2001	members(6)	genus (5)	Identified (4)	species(3)	social(3)
2002	extended(13)	house(9)	more(7)	houses(6)	social(5)
2005	small (7)	groups(6)	multiple(3)	hunting (3)	-
2006	corporate(15)	group(12)	model(8)	one (6)	groups(6)
2007	members(4)	-	-	-	-
2008	unknown(18)	family(14)	household(6)	-	-
2009	spaces(20)	houses(18)	hearths(16)	house(13)	extended(8)
2010	one (8)	camp(8)	multiple(5)	units(4)	single(4)
2011	male(5)	kinship(4)	private(4)	origin (3)	one (3)
2012	extended(6)	species(3)	Pueblo(3)	members(3)	large(3)
2013	groups(5)	small(3)	plots(3)	Individual(3)	-

The complete collocation data by frequency are represented effectively in the word cloud below, where dominant themes emerge.

Figure 35: Word cloud for collocations of FAMILY in *American Antiquity*

7.5 Results for *Historical Archaeology*

One of the principal reasons for including HA in the corpus was to find out if there were differences in the quantity and quality of gender research in the archaeology of the recent versus the distant past. It has been argued by Whelan (1991:17) and Vermeer (2009:319), amongst others, that historical archaeology can contribute more to the archaeological interpretation of gender because of the availability of both material cultural remains and historic materials, including documents, paintings, oral histories and ethnographic sources. The broad assumption is that these can provide more information about the ways in which gender is represented in archaeological deposits (Whelan 1991:17). The hypothesis was thus that HA would have a different, and perhaps

greater, emphasis on gender archaeology than the other journals in the corpus. Research articles from 1967 through 2013 (a total of 1143 articles and 9,739,985 words) serve as the corpus in this section (see Appendix 3).

7.5.1 The use of GENDER in HA

The frequency results for GENDER and SEX in relation to one another were obtained to find out if GENDER supersedes the word SEX at any point in the history of HA, and how the two words are used over time. Figure 36 demonstrates that in 1991 there is a major peak for GENDER of 1936 pmw, with a corresponding increase in SEX (358 pmw). Before 1991, SEX occurs at a higher frequency than GENDER, but then after 1991 GENDER occurs at a higher rate than SEX (except in the years 1996 and 2000). After 1991 SEX also occurs at a higher rate overall. This suggests that rather than GENDER replacing SEX, the popularity of both words increases after this point. There is a weak correlation in an increased rate of both the words together in 1995 and 2003, but overall, the frequency results do not indicate that the words are linked. Across the HA corpus, GENDER occurs at a rate of around 180 pmw, whereas SEX is around 60 pmw.

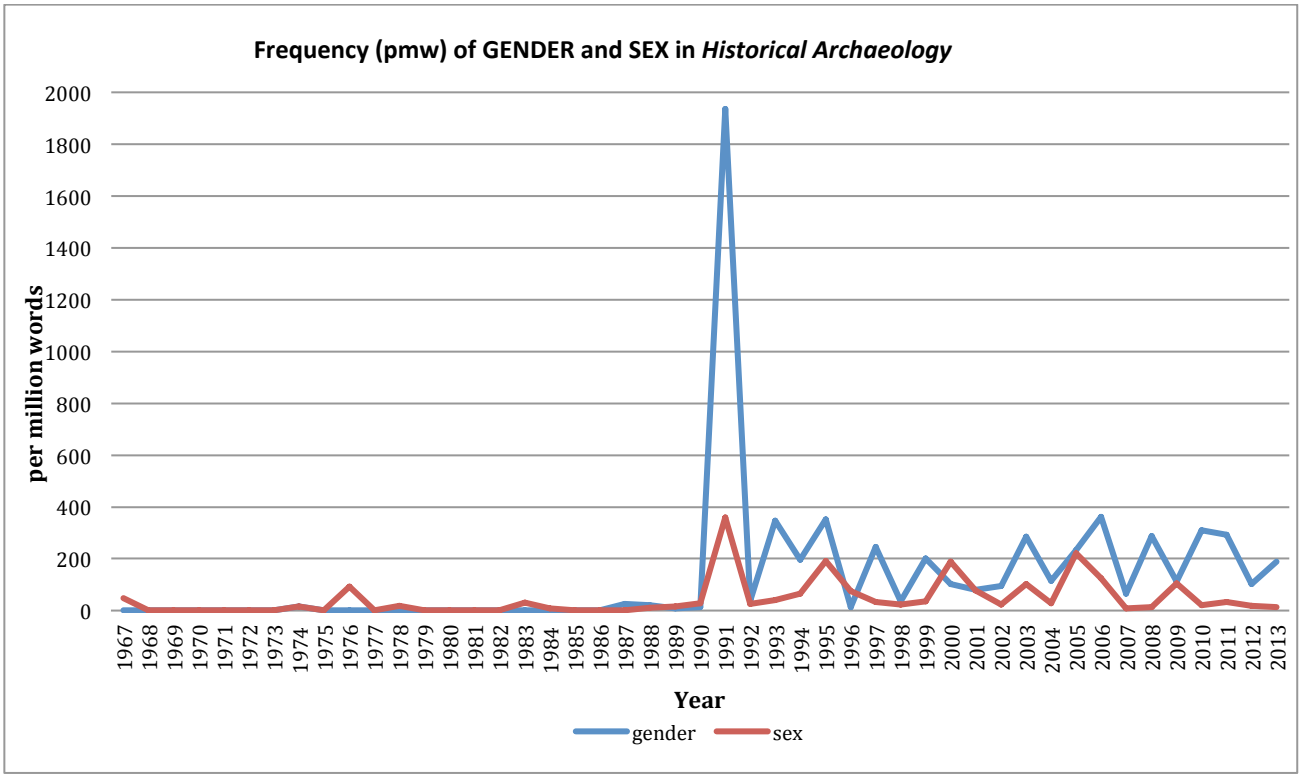

Figure 36: The proportional frequencies of SEX and GENDER in *Historical Archaeology*

The results of the collocations for GENDER were sorted by MI score and frequency rate (Table 32). There were no results meeting the minimum MI score from 1967 to 1990.

Table 32: Top five collocations of GENDER in HA, according to MI-score and frequency by year

Gender	1	2	3	4	5
1991	archaeology(69)	roles (66)	systems (48)	sex(35)	historical (31)
1993	cultural(19)	feminine (16)	creation(16)	archaeology (9)	historical (5)
1994	roles (16)	century (7)	relations (6)	cultural(5)	class(5)
1995	archaeology(16)	class(14)	age (11)	historical (7)	culture (6)
1997	class (28)	environment(11)	built (11)	relations (8)	archaeology(7)
1999	class (32)	race(12)	examining (10)	ethnicity(10)	archaeology(10)
2000	ethnicity (10)	status (6)	race (6)	class(6)	roles(5)
2001	archaeology (9)	historical (5)	ethnicity (5)	women(3)	table (3)
2002	class(15)	historical (8)	race (6)	ethnicity (6)	archaeology(6)
2003	class(39)	archaeology(24)	gender (22)	material (21)	culture (19)
2004	race(13)	class(12)	archaeology(6)	archaeologies(6)	ethnicity (5)
2005	class(17)	archaeology(12)	related (10)	race (8)	historical (7)
2006	ideology (22)	ideologies (17)	system (14)	dominant (13)	women (12)
2007	race (6)	class(6)	roles (4)	ethnicity (4)	status (4)
2008	class(37)	race (18)	age(16)	archaeology (15)	ethnicity(14)
2009	archaeology (8)	age(7)	class(5)	use (4)	status (4)

2010	mixed (16)	institutions(13)	new (12)	class(12)	race (10)
2011	class(34)	race (27)	women (13)	social(13)	roles (12)
2012	race (21)	labor(13)	class (11)	status (6)	ethnicity (6)
2013	class(16)	race (12)	archaeology (12)	ethnicity (6)	west(5)

The highest MI score for GENDER is with the word *ideologies* (15.74), indicating a very high likelihood the words would occur together. The most frequently occurring collocation of GENDER is '*class',* which occur together 289 times. GENDER also occurs frequently with '*archaeology*' (191 times), denoting discussions on *'gender archaeology'* in HA. This combination was also significant in AA, and a similar emphasis on gender archaeology as a subject or sub discipline is apparent in HA. Across the corpus there are no significant collocations for GENDER with the keywords MASCULINE, FEMININE, MAN, WOMAN, MALE, FEMALE, or MEN. Broadly this means that gender is not used as a noun-modifier, such as in 'male gender' or 'feminine gender', but is used as a single noun. There are three years where WOMEN co-occurs with GENDER, and is used with conjunctions.

As shown in the collocation table (Table 32), the words *class, race* and *ethnicity* also occur frequently with GENDER. *Class* has a particularly strong relationship, and is a word not seen in the results of AA. This combination of words reflects what Eagleton (1996:46) refers to as the 'great triplet' of gender, class, and race in historical archaeology. While traditionally historical archaeological research into identity has tended to focus specifically on a particular facet of identity, such as gender, the collocation data show that after 1991, gender has shifted to being examined as one of a set of intersecting concepts that also include age, class, ethnicity and status. While this is theoretically sound, the data from concordance lines also shows that the 'triplet' is used typically to form one syntactic unit (a noun phrase), assigning them the same semantic role in the text (see samples in Table 33). Much like 'men, women and children' or 'male and female', 'gender, class and ethnicity' can also be seen as an archaeological shorthand for addressing anything to do with social and identity analysis, rather than a specific focus on gender alone or specifically. In this way the words are

blunted into one concept, akin to what Ruth Tringham (1991:94) called treating archaeological subjects as 'faceless blobs'.

Table 33 demonstrates these trends in a sample of concordance lines for GENDER. The data reflect an increased frequency of GENDER in the 1990s, as well as changing themes over time. Overall, the concordances show a concern with gender identity, ideology and roles.

Table 33: Sample of concordance lines for GENDER in HA

1974		
tries to find the height, weight, and	**gender**	of the subject, and from
1987		
women's status by shifting women's	**gender**	roles from the domestic to the public
archaeological research is concerned with	**gender**	roles, division of labor, accompanying
with socio-political mechanisms for changing	**gender**	roles and status in disenfranchised
1992		
the Encomienda system, class, status, and	**gender**	roles as mechanisms effecting inter
tended to diminish regional, class, or	**gender**	distinctions among Spaniards,
equally to analyses of class, age,	**gender**	and all other social relations. When
1995		
of functional categories and determining the	**gender**	and age composition of a site
tailoring, but also the age and	**gender**	of the owner. Outside of historic
of reform even as it shaped	**gender**	ideology. The nature of this landscape
2001		
own homes. Divided along the lines of	**gender**	and ethnic identity, men and women,
often surmised from the recovery of	**gender**	-specific artifacts
of social inequality, ethnicity	**gender**	and race relations.
artifacts at the CCC camp site are	**gender**	-neutral; only the lone perfume bottle
2006		
changing concepts of social identity,	**gender**	class, and, perhaps, ethnicity,
dominant gender system but also alternative	**gender**	ideologies and practices created by

equality demonstrated that the stereotypic	**gender**	inequities in the larger culture
2007		
identities, other social dimensions, such as	**gender**	status, and ethnicity, were likely
2010		
or in terms of regional origin, occupation, or	**gender.**	Also apparent is the tension
community and past dynamics of class,	**gender**	ethnicity, and racism.
by issues related to race, class,	**gender**	and ethnicity. The
relationship between education, race,	**gender**	and class. Understanding
2013		
addressing issues related to race,	**gender**	class, or labor—we can make a difference.

As stated, the hypothesis was that *gender, masculine and feminine* should co-occur in a statistically significant manner in HA. This was because the archaeology of the more recent past should be more disposed to discussion around socially constructed feminine and masculine genders due to the availability of documentary evidence on the subject. It is apparent from Figure 37 below that the frequency results for MASCULINE and FEMININE are very low, but also that there is no relationship between these words and GENDER. Figure 37 also shows that in 1991 and 1993 there is a slight increase in the frequency of both FEMININE and MASCULINE, and that these two terms co-occur, but overall that GENDER is used much more often, and not in parallel. The collocations also show no significant co-occurrence of GENDER with either FEMININE or MASCULINE. The word MASCULINE appeared only 43 times in the 9,739,985 word HA corpus (normed to 4.4 per million words), and there are no collocations that meet the requirement of significance of an MI score of three or more. There were a small number of collocations for FEMININE, but only in 1993, with the words *gender* (16), *creation* (16), *cultural* (15) and *fort* (3).

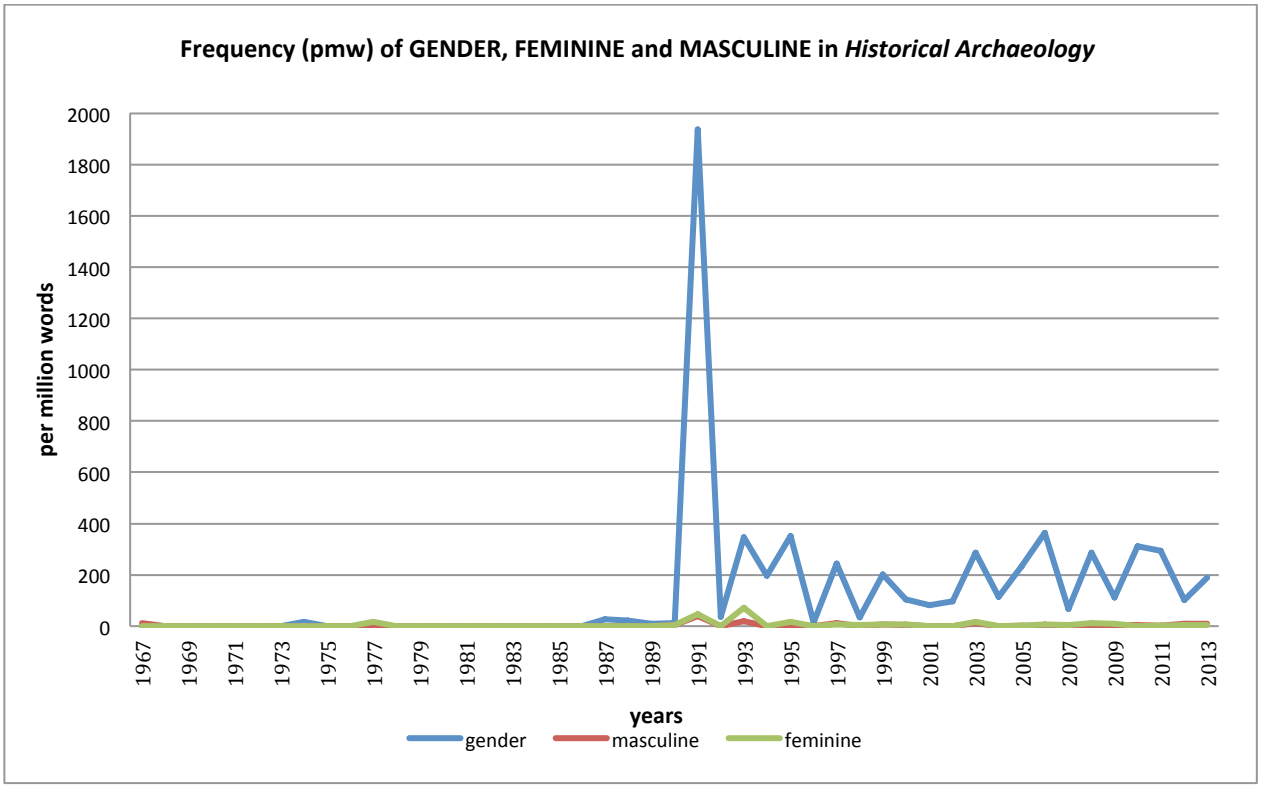

Figure 37: The proportional frequencies of GENDER, FEMININE and MASCULINE in *Historical Archaeology*

The relationship between GENDER, MALE and FEMALE is also negligible. Figure 38 shows there is an increase in the words together in 1991, 1995 and 2003, but overall GENDER is not used with FEMALE and MALE. The word SEX was also included in Figure 38 to ascertain if MALE and FEMALE are used in combination with SEX instead. The three words increase at similar, but low, rates, with peaks in 1983, 1991, 1995 and the 2000s.

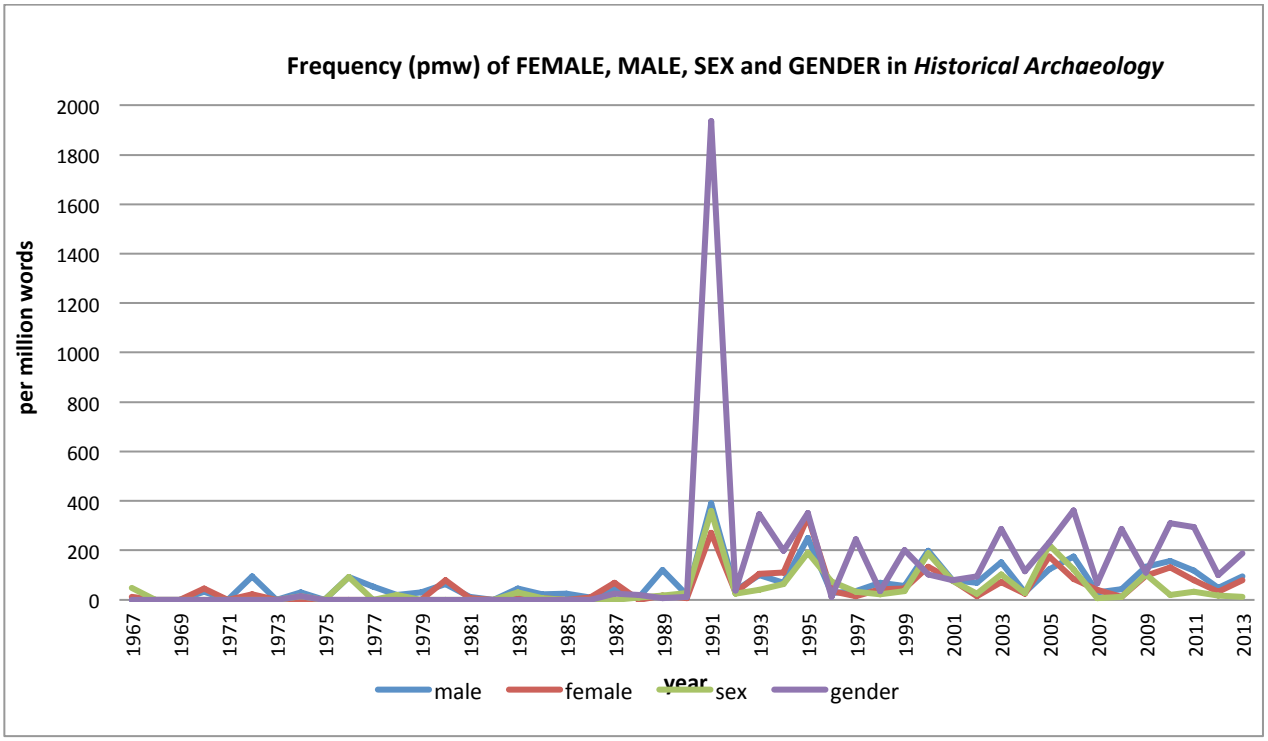

Figure 38: The proportional frequencies of FEMALE, MALE, SEX and GENDER in *Historical Archaeology*

Overall, after 1991, GENDER is used more than the keywords MALE, FEMALE and SEX, demonstrating some impact and influence on language after the special issue of that year, 'Gender in Historical Archaeology'. MALE occurs at a higher, though comparable, rate to FEMALE across the corpus, at 87 pmw and 68 pmw respectively, but both are relatively low frequency words. To more closely examine the context of MALE and FEMALE in HA the collocations are provided in Tables 34 and 35 below.

Table 34: Top five collocations of MALE in HA, according to MI-score and frequency by year

MALE	1	2	3	4	5
1972	adult(4)	-	-	-	-
1977	adult(3)	-	-	-	-
1993	dwellings (4)	slaves (3)	single (3)	female(3)	adult(3)
1994	female(3)	-	-	-	-
1995	board(6)	women (5)	one (5)	household (5)	female (5)
1998	adult (6)	shoe(5)	important (4)	figure(3)	-
1999	white (19)	female(7)	unknown(4)	male(4)	single(3)
2000	population (25)	age (14)	female (11)	male (10)	marriage (8)
2001	female(14)	male(4)	European (4)	Aboriginal (4)	workers(4)
2002	work(3)	-	-	-	-

2003	male (67)	indeterminate (54)	female(26)	adult(17)	young(14)
2004	female(4)	burial(3)	adults(3)	-	-
2005	specific (10)	female(8)	transient (6)	others (5)	households (5)
2006	women (10)	female(8)	white (7)	one (6)	dominated(6)
2008	women (3)	-	-	-	-
2009	adult(17)	feature (14)	households (9)	infant (8)	female(8)
2010	female(36)	male (14)	inmates (11)	overseers (6)	students (5)
2011	white (10)	room (5)	patients (5)	female (5)	male (4)
2012	female(10)	male (6)	total (4)	line (4)	gamble (4)
2013	women (3)	households (3)	-	-	-

These results for MALE are also grouped by theme, to enable some general observations from the data. They appeared in two main semantic categories: *identification* and *performance*. Within the category of 'identification' further distinctions could be made under the subcategories 'relational' and 'classification':

1. Identification

a) Relational/kinship/binomial pairs: female, women, line

b) Classification/human remains/burials*:* adult, white, infant, male, one, burial, young, indeterminate, European, Aboriginal, population

2. Performance: Households, dwellings, overseers, students, patients, board, workers, slaves, dominated, transient, important, marriage

In HA the use of 'white male' occurred regularly and there was less content on human remains and burials than AA. The use of occupations with MALE, such as 'male students', was also a point of difference. The highest MI score for MALE was with the word *adult* (13.84), and for FEMALE with the word *indeterminate* (16.8).

Table 35 below shows the collocation results for FEMALE. In some years the results correspond to those of MALE, indicating the words are used as a binomial pair and in a similar context. In terms of Baker's (2014) concept of 'male firstness', male and female co-occur 157 times (with an MI score higher than three), with MALE occurring to the left, or preceding FEMALE 99 times.

Table 35: Top five collocations of FEMALE in HA, according to MI-score and frequency by year

FEMALE	1	2	3	4	5
1980	adult(3)	-	-	-	-
1993	military(3)	male(3)	-	-	-
1994	female(15)	male(9)	geophysics (6)	areas(4)	-
1995	reform(13)	moral (11)	society (10)	headed (10)	board(9)
1996	birds(5)	species (3)	many (3)	-	-
1998	shoe(3)	-	-	-	-
1999	white (17)	male(7)	unknown(4)	-	-
2000	population (23)	male(11)	age (7)	marriage(6)	female (6)
2001	male(12)	totals(4)	female (4)	Aboriginal (4)	supine(3)
2003	work(3)	-	-	-	-
2003	male (26)	indeterminate (9)	children (10)	adult(8)	probable(5)
2004	male(4)	one(3)	-	-	-
2005	wealthy (19)	free(19)	specific (15)	items (11)	households (11)
2006	male(8)	one(4)	laundry (4)	women(3)	created(3)
2007	eggs (3)	die (3)	-	-	-
2009	adult(15)	male (8)	one (7)	infant (6)	feature(6)
2010	female(38)	male (36)	inmates (15)	gender (5)	waters (4)
2011	white (10)	room (5)	patients (5)	female (5)	male (4)
2012	male(10)	female (6)	total (3)	creole (3)	-
2013	immigration (4)	depot (3)	-	-	-

As with MALE, the collocation results for FEMALE in Table 35 are also grouped by theme. Like MALE, they also appeared in two main semantic categories: *identification* and *performance*. There were some differences in the 'performance' category related to occupation and status.

1. Identification

a) Relational/kinship/binomial pairs: male, female, children

b) Classification/human remains/burials*:* adult, white, infant, one, indeterminate, population, supine, Aboriginal, creole

2. Performance: gender, households, rooms, laundry, moral, military, reform, immigration, depot, patients, inmates, free, items, wealthy, marriage, board, headed, society, areas

As shown in Figure 38, the keywords MALE, FEMALE and SEX are relatively low frequency terms in HA. Nevertheless, the graph shows that there is a relationship between an increase of SEX and an increase of FEMALE in 1991, 1995 and from 2000 to 2009. From these results it is possible to infer that both words have increased in popularity in recent years. In contrast, however, the collocations for FEMALE do not show any significant co-occurrence with SEX. In other words, although they are likely to be used in the same discussions, they are not used together in phrases. The collocations for SEX were examined to determine its context of use in HA. A common theme are the words that are combined with sex to denote identification, such as *age, ratio, burial, population,* etc. However, words such as *women* and *class* can be used as either 'identification' or 'performance' terms, such as with the collocated word *prostitution*.

Table 36: Top five collocations of SEX in HA, according to MI-score and frequency by year

SEX	1	2	3	4	5
1967	age(4)	-	-	-	-
1994	age(5)	historical(3)	group(3)	class (3)	-
1996	age (8)	animals (5)	represented (4)	size(3)	animal(3)
1997	New York(3)	-	-	-	-
1999	age (4)	-	-	-	-
2000	age (26)	ratio(17)	primary (4)	position(4)	burial (4)
2001	age (5)	prostitution(4)	race (6)	class(6)	roles(5)
2002	camps (3)	-	-	-	-
2003	age(12)	male(11)	indeterminate (6)	more (5)	individual(4)
2004	women(3)	class(3)	age (3)	-	-
2005	commercial(8)	prostitution(7)	class (7)	age(7)	women (6)
2006	ancestry (8)	population (5)	determine(5)	race (4)	sample(3)
2009	age (24)	groups(8)	distribution (5)	years (3)	individual (3)
2011	women (5)	each (3)	-	-	-
2012	age (4)	-	-	-	-

The concordance lines for women and class were explored, and the results shown below. They represent a range of topics, from the identification of burial and grave goods, to the Magdalen Asylum in Philadelphia and brothels and commercial sex in New York.

Table 37: Sample of concordance lines for SEX with the collocations class and women in HA

1984		
are thought to somehow signal ethnicity or	**sex**	or class or prestige. This quest has
2003		
part, the muskets were traded for	**sex**	with Maori women. With their newl
used in discussing women	**sex**	and gender, pointing out that all
2004		
of women with reliable age and	**sex**	estimates exhibit changes in bony muscle
2005		
a woman working in the	**sex**	industry. For that reason alone
age of repressed middle-class sensuality.	**Sex,**	intoxicating drink, tobacco, all were a

7.5.2 The use of WOMEN and MEN in HA

Across the entire corpus the keyword WOMEN scores more highly than MEN. This is also the case for HA, where, on average, WOMEN occurs at a rate of 477 pmw and MEN at 359 pmw. This trend is visible in Figure 39, which shows a first peak for WOMEN of 1435 pmw in 1987. Prior to this there were nine years of null values combined with rates below 100 pmw in most prior years. MEN peaked in 1976, with a rate of 2849 pmw, and there is a downward trend over time.

1987 marks a shift in usage of the two words and after this point WOMEN occurs at a higher rate than MEN in most years. There are two large peaks for WOMEN:2649 pmw in 1991 and then 2489 pmw in 1995. Overall, the early 1990s saw the highest frequency of the use of WOMEN in HA, and there is an overall upward trend across the corpus. The use of the two words together as a pair is less distinct after 1995 and indicates that WOMEN are discussed as separate subjects after this time.

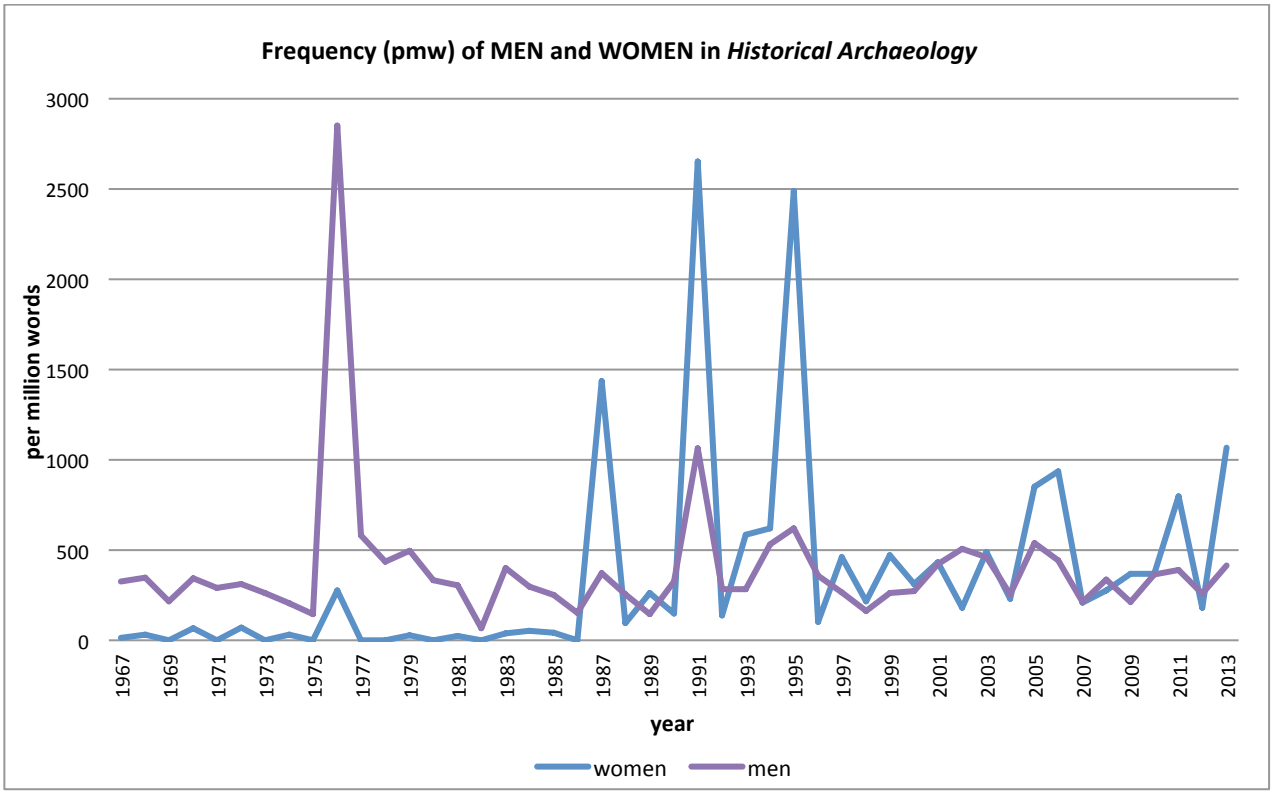

Figure 39: The proportional frequencies of WOMEN and MEN in *Historical Archaeology*

The collocation results for MEN in Table 38 provide insight into the declining use of MEN over time in HA as indicated by Figure 39. Generally, the downward pattern can be attributed to the rise of feminist-inspired research, where WOMEN becomes a subject matter in itself. In looking at the collocations, MEN becomes increasingly linked to WOMEN in the 1990s as a binomial pair. The co-occurrence of the two words then increases in frequency in the 2000s and 2010s. Prior to this, MEN and WOMEN were discussed more often in terms of separate research. This is demonstrated by the word *'enlisted*', for instance, which appears very frequently with MEN throughout HA, and also with the highest MI score (16.56). There was a large amount of content related to MEN in military settings, and the work and status associated with the armed forces and battles or frontier conflict (see concordance lines in Table x below). After 2000, MEN is used in terms of '*enlisted*' and other nouns, but the highest frequencies occur with WOMEN, and in the context of one syntactic unit with a conjunction, e.g. *'men and women'.* Broadly, therefore, it can be seen that MEN are a focus of research between 1967 and 1987, and WOMEN from 1987 to 2013, but a preference for 'men and women'

as a unit increases across HA in addition to these discussions. The collocation data for both MEN and WOMEN (Tables 40 and 41) provide useful comparative information about the ways the two keywords are used.

Table 38: Top five collocations of MEN in HA according to MI-score and frequency, by year

MEN	1	2	3	4	5
1968	rag (3)	-	-	-	-
1971	two(3)	employing (3)	-	-	-
1972	surf(4)	-	-	-	-
1977	enlisted (4)	first (4)	structure(3)	Connecticut (3)	-
1978	supplied(3)	enlisted (3)	-	-	-
1979	base(4)	-	-	-	-
1981	made (3)	-	-	-	-
1983	archaeological(3)	bottles(3)	-	-	-
1984	single (4)	-	-	-	-
1985	two(3)	-	-	-	-
1987	enlisted(13)	labor(4)	total(3)	sites (3)	site (3)
1988	three (3)	two(3)	-	-	-
1989	women(4)	-	-	-	-
1990	enlisted(30)	work (4)	local (4)	listed(4)	area(4)
1991	women(113)	work(24)	activities (21)	Spanish (10)	Century (10)
1992	enlisted(17)	types (4)	single (3)	camp (3)	large (3)
1993	enlisted (14)	women (8)	associated (7)	single(6)	officers (5)
1994	women(29)	two (15)	Euroamercian (12)	many (9)	children(8)
1995	women(49)	society(10)	Philadelphia (6)	class (6)	smoking(5)
1996	enlisted(39)	barracks(30)	officers (19)	quarters(12)	unit (6)
1997	women (30)	Spanish(8)	two (7)	American (4)	men (4)
1998	women(7)	ready(3)	-	-	-
1999	women(10)	latrine (7)	work (6)	enlisted (6)	class(6)
2000	women (22)	enslaved 10)	creole (6)	health(4)	class (4)
2001	women(27)	young (27)	two(7)	Irish(7)	soldiers(4)
2002	enlisted(21)	women(12)	working(9)	work (8)	mining(6)
2003	women(37)	children(10)	many (6)	two(5)	historical(5)
2004	women (9)	many(5)	company (4)	soldiers (3)	settle (3)
2005	women(38)	single (11)	enlisted (9)	used(8)	shoes (8)
2006	women(27)	work(12)	equal(6)	children(6)	young (5)
2007	women(18)	young(7)	French(4)	abalone(4)	crew(3)
2008	women(25)	work(8)	Chinese(8)	village(7)	American(7)
2009	women(18)	working(4)	single(4)	older(4)	men(4)
2010	women (30)	work(9)	native (7)	poor(6)	institutions (5)
2011	women(47)	men(10)	white (6)	working(5)	class(5)
2012	women(13)	single(5)	four (5)	world(4)	white(4)
2013	women (34)	loose(11)	lonely (11)	rethinking(8)	demographics(8)

The semantic groups that emerged for MEN in HA are different to other keywords and to those in AA. The majority could be grouped under the theme of 'identification', but with the unique categories of occupation and class or status, which are linked concepts. Overall, MEN were described mostly in terms of race and occupation:

1. Identification

a) relational/kinship/binomial pair: women, children, men

b) racial/ethnic: white, Chinese, French, Euro-American, American, creole, Spanish, Irish, local

c) occupation: enlisted, crew, soldiers, company, mining, officers, unit, employing, institutions, working, work, labor

d) status/class: single, poor, older, lonely, enslaved, young, health, class, barracks, society, equal

In terms of concordance lines, there are clear differences when MEN is used in a sentence (and hence as a research subject) compared to when MEN is used as a unit with WOMEN (where together the meaning is generally 'people' and/or family groups). MEN also occurs before, or to the left of WOMEN more often.

Table 39: Sample of concordance lines for MEN with the collocation *enlisted* in HA

1977		
desire for uniformity in the enlisted	**MEN**	lines was such that he
behind the first row of enlisted	**MEN**	huts, regardless of
quarter issue was for enlisted	**MEN**	while the brass button
1987		
enlisted men's hut, and several enlisted	**MEN**	hut fireplaces within the
quantity of ceramic found in both enlisted	**MEN**	and officers' huts, as types is
presence of porcelain at an enlisted	**MEN's**	hut demonstrates that this was not
1996		
and enlisted	**MEN**	at Fort Fillmore
and enlisted	**MEN's**	lives
2002		
on- commissioned officers and the enlisted	**MEN**	of the Sixth Regiment of
various ranks of officers and enlisted	**MEN**	would be placed on the relative
and archival rankings. While the enlisted	**MEN**	received more low than high ranking

Table 40: Sample of concordance lines for MEN with the collocation *women* in HA

1991		
family, kindred, and any hired	**MEN**	or women. The significance of
broken pottery left by	**MEN**	and women in the New
sufficient and dependent on both	**MEN**	and women to produce the
2001		
to escape. The others ,	**MEN**	women, and children ,
rush period in Alaska found	**MEN**	and women in what was popularly
temperance movement included one thousand	**MEN**	and women, most of whom were Irish
2013		
At least 18 enslaved	**MEN**	and women lived and labored at Van Winkle's
describes the moral duties of men	**MEN**	and women of masters and servants, and
French reports state that 800 Meskwaki	**MEN**	women, and children were besieged

The collocations for WOMEN are given in Table 41. The clusters that emerged were grouped similarly to those for MEN, but with the addition of the category of 'discipline' where the context is the study of '*women in archaeology*'. The highest MI score for WOMEN was *asylum* (16.02), a reflection of a 1995 volume dedicated to the Philadelphia Magdalen asylum, but also of subsequent papers on women in various types of asylums. WOMEN and MEN are similarly discussed in terms of race, class and work. While a dominant theme around MEN is the armed forces, the themes around WOMEN are prostitution and institutions. The keyword CHILDREN also frequently co-occurs with WOMEN, and with statistical significance.

Table 41: Top five collocations of WOMEN in HA according to MI-score and frequency, by year

WOMEN	1	2	3	4	5
1970	three (3)	-	-	-	-
1985	men(3)	-	-	-	-
1993	military(11)	archaeology (11)	fort (9)	men (8)	engendering(7)
1994	men(29)	children (18)	American (17)	African (12)	Euroamerican (11)
1995	men (49)	asylum (40)	class (35)	property (34)	fallen(31)
1996	role(3)	model(3)	changing (3)	-	-
1997	men(30)	children (9)	women(8)	roles (7)	black (6)

1998	men(7)	new(5)	history(4)	work(4)	children(4)
1999	class(52)	middle(25)	working(12)	men(10)	archaeology(3)
2000	men (20)	enslaved(11)	African (7)	Creole(7)	children (7)
2001	men(21)	Irish (9)	working(9)	street (9)	children(7)
2002	children (15)	men(11)	women (6)	class(4)	role(3)
2003	men(37)	children(27)	women (5)	archaeology (5)	century (7)
2004	children (10)	men(9)	archaeology(8)	prehistory (6)	Indian (5)
2005	men (31)	working(21)	prostitutes(16)	house(13)	prostitution (12)
2006	men(53)	work (22)	rights(20)	reform(20)	domestic(20)
2007	men(18)	tobacco(9)	Chesapeake(10)	work(8)	native(6)
2008	Chinese (19)	Asian(16)	American(13)	women (8)	united(8)
2009	children(21)	working(18)	men(18)	class(14)	domesticity(12)
2010	men (30)	work(11)	gender (8)	new(7)	women (6)
2011	men(47)	women(20)	class(20)	working(19)	poor(18)
2012	men(13)	white(10)	Florida (6)	family(5)	born(4)
2013	landlord(42)	men(34)	class(32)	village(29)	family (16)

1. Identification

a) relational/kinship/binomial pair: men, children, women, family

b) racial/ethnic: white, Chinese, Asian, Euro-American, American, creole, Chesapeake, Irish, Indian, native, black, African

c) occupation: prostitution, prostitutes, street, working, work, landlord, role, domesticity, domestic, house, property

d) status/class: poor, enslaved, born, class, fallen, middle, role, roles, rights, reform

2. Subject: archaeology, prehistory, engendering

7.5.4 The use of WOMAN in HA

As with AA, the use of WOMEN was examined in parallel with WOMAN. WOMEN occurs more frequently than WOMAN in HA, at a rate of 477 pmw to 75 pmw respectively. WOMAN is used similarly to FEMALE (68 pmw). The collocation data (Table 42) and their semantic groupings expose how a singular woman is discussed in HA. There are some differing themes to WOMEN, such as some content on rights and roles (in the context of suffrage), but mostly it is associated with the identification of human remains. Both words are similarly used in discussions on institutionalisation.

Though the journal had a great deal of content around WOMAN (and GENDER and WOMEN) in 1991, this only affected keyword frequency scores. As the themes and subjects raised in 1991, and in other volumes, did not reoccur together across the corpus, they recorded an MI score of zero. So, for example, the 1991 issue has the highest number of 'hits' and frequency scores for WOMAN and WOMEN, but all of these recorded an MI score of zero, thus they do not show in the data in Table 42. The collocation results thus show that significant themes and word combinations only occurred in the 2000s.

Table 42: Top five collocations of WOMAN in HA according to MI-score and frequency, by year

WOMEN	1	2	3	4	5
1993	American(6)	home (5)	man (3)	-	-
1994	one(3)	-	-	-	-
1995	reform (34)	material (32)	culture (32)	nature (7)	asylum(5)
1996	American(3)	African(3)	-	-	-
1997	American(6)	husband (4)	African(4)	man(3)	disease (3)
1998	young(4)	Belgian(4)	man(3)	child(3)	-
1999	year(3)	old(3)	-	-	-
2000	child (12)	ratios(10)	fertility(8)	general(7)	estimated (7)
2001	young(3)	-	-	-	-
2004	young (3)	years(3)	death (3)	burial(3)	aged(3)
2005	year(3)	old(3)	keep (5)	-	-
2006	rights(3)	new (3)	man(3)		
2007	Indian(3)	-	-	-	-
2008	Chinese(3)	-	-	-	-
2010	white(3)	Santa Clara (3)	-	-	-
2011	African(3)	American(3)	Berwind(3)	-	-
2012	married(3)	family(3)	-	-	-
2013	village (4)	one(4)	-	-	-

Overall, the results for WOMAN can be grouped under **identification:**

a) relational/kinship/binomial pair: man, family, child, family, husband, married, home

b) classification: young, old, one, ratios, year, death, burial, aged, general, estimated, [disease, fertility]

c) racial/ethnic: American, African, Chinese, white, Indian, Belgian

7.5.5 The use of MAN in HA

The data for WOMAN and its 'pair' MAN in HA is shown in Figure 40 below. This shows that, across time, MAN occurs at a consistently higher rate. The exceptions are 1987 and 1995, where WOMAN scores more highly per million word counts. The graph also shows a distinct correlation between the two words: in some years both increase, especially after 2000, while in others there is an inverse correlation. MAN peaks in 1976 with 1470 pmw, much higher than WOMAN, which peaks at 463 pmw in 1995. The lowest rate for MAN was in 1982, and there is a decline in use over time. WOMAN shows a slight increase over time across the HA corpus. This trend is likely due to MAN becoming replaced or superseded by the word PEOPLE, not because WOMAN is used in its place.

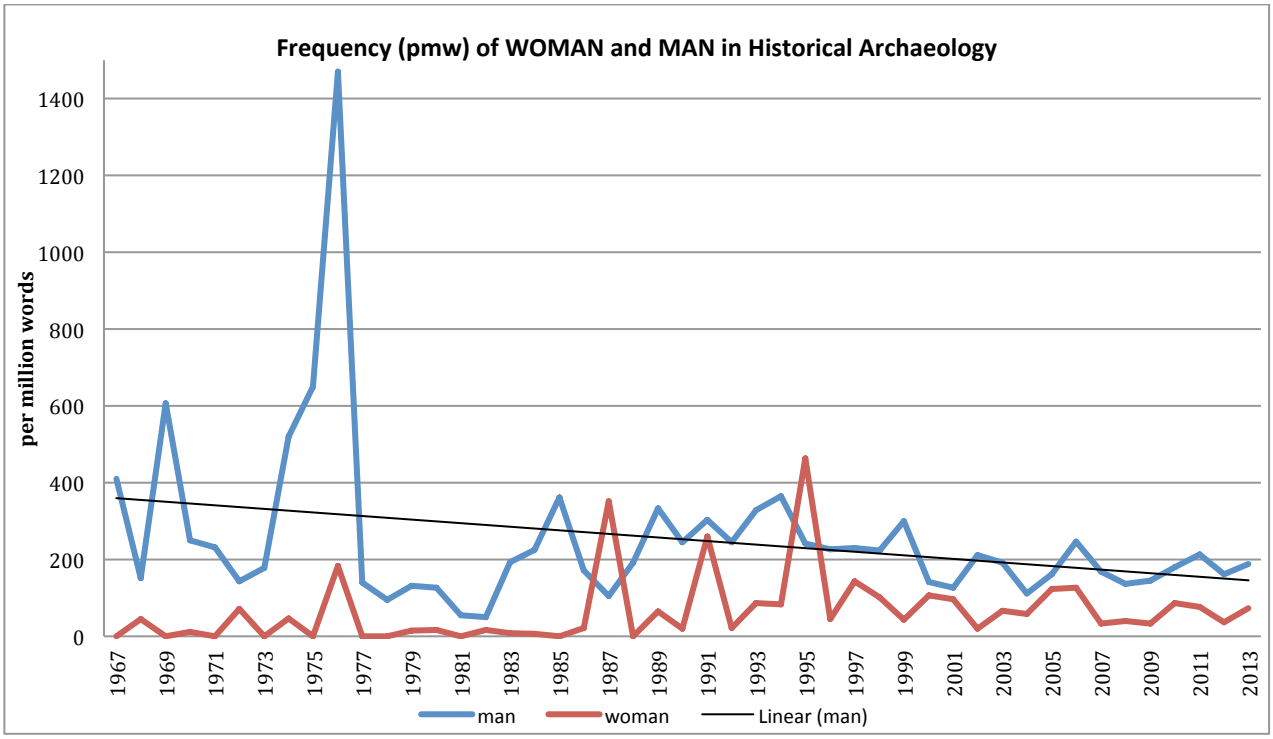

Figure 40: The proportional frequencies of WOMAN and MAN in *Historical Archaeology* showing trendline for MAN

The results from Figure 40 can be compared with Figure 41 below, which show the results of the word MAN, HUMAN and PEOPLE in HA. MAN, as stated, declines in frequency over time. HUMAN stays relatively constant across the corpus, and, apart

from two peaks (one in 1976 of 1470 pmw and another in 2001 of 939 pmw), is used at a rate of around 220 pmw. This is a similar rate to that of MAN (208 pmw). There is no indication that HUMAN is used to replace MAN in HA.

The word PEOPLE ranks higher than both MAN and HUMAN in HA, around 550 pmw. From the graph it is apparent that in 1976 MAN is surpassed by PEOPLE, which is then used increasingly over time. This pre-dates the journal's introduction of gender neutral language in 1983 (Adams 1993:27).

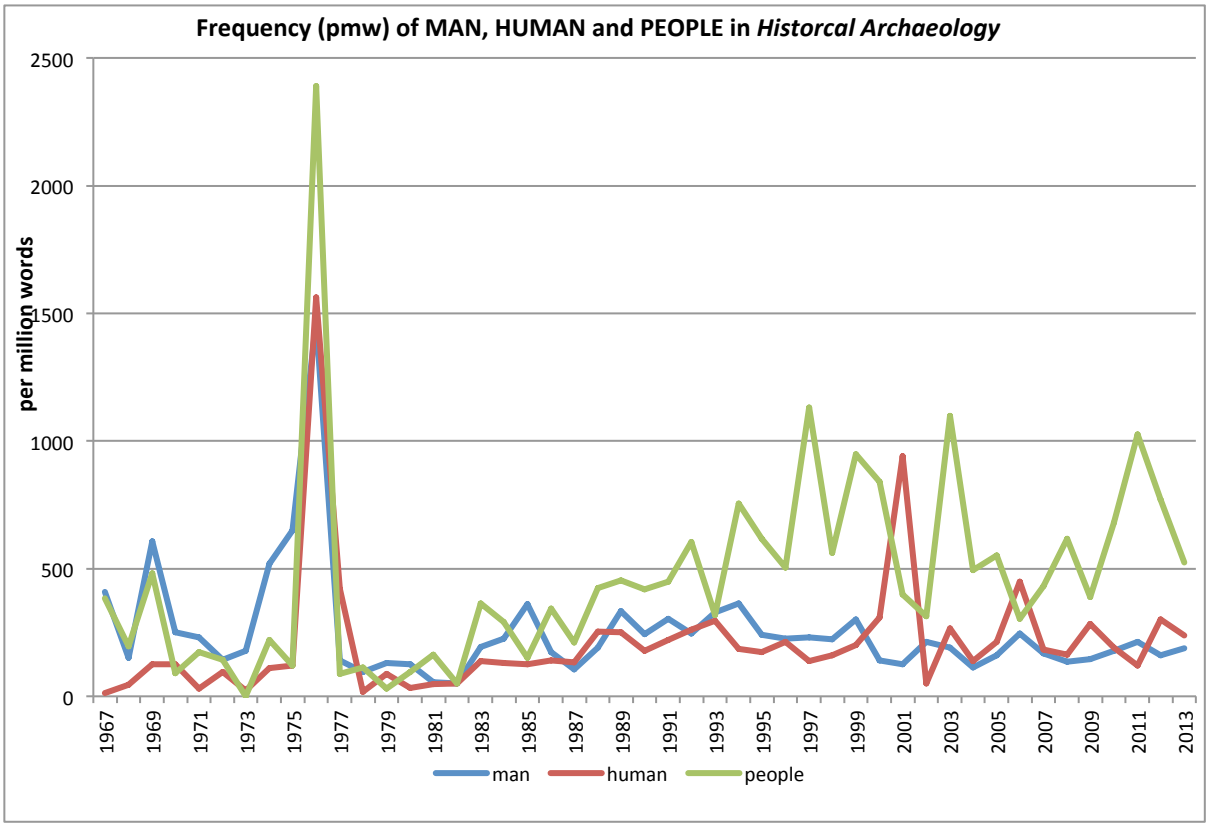

Figure 41: The proportional frequencies of MAN, HUMAN and PEOPLE in *Historical Archaeology*

To determine if MAN is used as a generic term for either HUMAN or PEOPLE, or simply used to describe one male person, the examination of collocates was necessary. These results are shown in Table 43. They reveal that MAN is most often used to describe an individual male. The highest MI score was, however, 14.37 with both the words *diffusion*

and *inoffensive.* Table 43 shows that terms such as 'man made' occur frequently and persistently. This phrasing is a point of difference between HA and AA. HA uses terms such as 'man made', 'man hours', 'right hand man', 'the every man', 'the ordinary man' and 'the working man' throughout the corpus. Worth noting is also that MAN is not used in combination with WOMAN in any statistically significant manner except in 1997 and 2000, and these are still minor occurrences in terms of the corpus overall. There are words that were excluded from the data, but that are nevertheless 'gendered': craftsman, businessman, workman, yeoman, etc. These kinds of male generics are also quite common across the HA corpus. In addition to these terms the concordance lines for MAN show the generic use for HUMAN in HA, especially before the mid-1990s (see Appendix 3). These results have MI scores of zero, however, and so do not appear in Table 43.

Table 43: Top five collocations of MAN in HA according to MI-score and frequency, by year

MAN	**1**	**2**	**3**	**4**	**5**
1967	historian (6)	archaeologist(6)	mind (3)	crew(3)	-
1969	old(4)	-	-	-	-
1970	one(4)	-	-	-	-
1972	article(3)	-	-	-	-
1974	made(5)	long(3)	-	-	-
1975	man(12)	cultural (12)	young(10)	-	-
1983	selection (5)	natural(5)	-	-	-
1984	per(4)	two(3)	-	-	-
1985	every(3)	one(3)	hours (3)	family(3)	-
1986	made(4)	all(3)	-	-	-
1989	good(10)	place(3)	culture(3)	-	-
1990	working(4)	study (4)	site(4)	Methodist (4)	southern (4)
1992	made(5)	hand (3)	figure(3)	early (3)	-
1993	discovered(10)	made(7)	cultural(7)	northeast (6)	survey(5)
1994	one(7)	button(7)	water (6)	company(5)	buttons(5)
1995	archaeology(6)	historical(5)	household(4)	other(4)	board(4)
1996	cultural(3)	-	-	-	-
1997	white(8)	African(7)	one(6)	young (5)	woman (5)
1998	young(5)	woman(3)	house(3)	-	-
1999	early(6)	review(4)	old(4)	history(4)	resource (3)
2000	African(5)	white (4)	French (4)	women(3)	woman (3)
2001	young(3)	working (3)	-	-	-
2002	working(4)	old (4)	young(3)	business(3)	-
2003	colored(5)	iron(4)	militia(4)	black(3)	work (3)

2004	garrison(4)	town (3)	new(3)	moon(3)	-
2005	white(5)	young(3)	ten(3)	social(3)	-
2006	iron (13)	one(10)	only(4)	death(4)	Lindow (4)
2007	stand(20)	man(18)	second(16)	old(16)	third(13)
2008	white(8)	one(3)	listen (3)	lectures(3)	ion (3)
2009	brick(4)	year(3)	skeleton(3)	old (3)	mountain (3)
2010	national (6)	township(4)	one(4)	slavery(3)	self(3)
2011	poor(29)	thief(26)	rich (26)	pioneer(26)	man (26)
2012	white(13)	family(6)	world(4)	aloof (4)	Kennewick (3)
2013	good (4)	white(3)	independent (3)	any(3)	-

7.5.6 The use of HUMAN and PEOPLE in HA

There is a large difference in the frequency rates for the keywords HUMAN and PEOPLE in HA, as reflected in Figure 41. PEOPLE is used at more than twice the rate of HUMAN, and is the keyword used most in the HA corpus at an average rate of 546 pmw. This broadly supports the hypothesis that PEOPLE is used to describe humans in the recent past, whereas in deep time the word human is preferred; HUMAN is used more often than PEOPLE in both AA and the JAMT.

The collocations for HUMAN are given in Table 44 below. The highest MI score was with the word *behavio*r (15.52), which is also a high frequency collocation. The word *remains* occurs at a consistently high rate after 2000. It is observed that the focus in HA shifts from the interpretation of 'human behavior' to the interpretation of 'human remains' over time. The concept of 'human rights' also enters HA in 2001, and reoccurs after this year. Overall, the themes are remarkably consistent with the results for AA, where the trend in North American archaeology seems to be an interest in human behaviour from the late 1960s to the late 1990s, and after 2000 a focus on human 'remains' and a more scientific language and approach. This seems contrary to the processual and post-processual movements, i.e. a focus on the technology rather than the form of argument, as is discussed in Chapter Seven.

Table 44: Top five collocations of HUMAN in HA according to MI-score and frequency, by year

HUMAN	1	2	3	4	5
1969	past (4)	-	-	-	-
1976	abilities(3)	-	-	-	-
1977	behavior(17)	interpreting(9)	applications(7)	-	-
1983	remains (5)	discovery(4)	-	-	-
1984	behavior(3)	about(3)	-	-	-
1985	behavior(4)	patterns(3)	bone(3)	-	-
1987	behavior(4)	-	-	-	-
1988	behavior(5)	social(4)	organization(3)	-	-
1989	activities(3)	cannon(3)	project(3)	subsistence(3)	-
1990	behavior(5)	study(4)	archaeology(4)	remains(3)	located(3)
1991	remains(10)	behavior(10)	social(4)	bones(4)	nature(4)
1992	behavior(11)	natural (5)	material(5)	culture (5)	activity(5)
1993	waste(6)	behavior(5)	selection(4)	activity(4)	other (4)
1994	health(7)	behavior(6)	social(4)	landscape (4)	natural(4)
1995	beings(3)	body(3)	social(3)	world(3)	-
1996	remains(4)	occupation(4)	activity(4)	material(4)	action(4)
1997	natural3)	sources(3)	-	-	-
1998	waste(8)	garbage(3)	disposal(3)	-	-
1999	kind(7)	beginnings(4)	society(3)	interaction(3)	environment (3)
2000	behavior(15)	waste (7)	past (7)	study(6)	disposal (5)
2001	remains(78)	rights (65)	recovery(17)	behavior(11)	skeleton (10)
2003	remains(27)	identification(9)	advances(8)	behavior(7)	skeletal (6)
2004	environment(4)	remains (3)	history(3)	-	-
2005	remains(19)	skeletal(8)	behavior(7)	past (6)	collection (4)
2006	remains(49)	archaeological(7)	analysis(7)	historical(6)	artifacts (6)
2007	remains(6)	waste(5)	dignity(4)	analysis(4)	against(4)
2008	bone(9)	remains(7)	stable (4)	rights(4)	prehistoric (4)
2009	remains(31)	found(11)	bones(10)	behavior (7)	rights (5)
2010	ecology(7)	remains(6)	between(6)	historical(5)	animal(5)
2011	rights(5)	social(4))	cultural (4)	world(3)	food (3)
2012	remains(32)	body(10)	being(9)	modern (7)	realities (6)
2013	social (5)	life (5)	past (3)	justice(3)	agency(3)

The collocations for PEOPLE are given in Table 45 below. The word is typically used with, and after, an adjective. Many of the collocations are quite generic, for example, there are high rates for *many, some, more, new* and *other*. On the whole, the world PEOPLE is used to make generalisations about groups, and in the context of who people 'are'. After 2000 there is a change to a more frequent use with a noun modifier to describe cultural groups in much more specific terms, such as *African people*, *Indigenous people*

and *Aboriginal people*. The highest MI score for PEOPLE was with *African* (14.65), and there is a shift in focus (reflected in increasing collocations) around African, enslaved, Black and Indigenous peoples from 1996 to 2013.

Table 45: Top five collocations of PEOPLE in AA according to MI-score and frequency, by year

PEOPLE	1	2	3	4	5
1967	first (4)	years(3)	similarly (3)	period (3)	older (3)
1968	all(3)	-	-	-	-
1969	use(3)	some(3)	-	-	-
1974	many(3)	-	-	-	-
1976	silcott (7)	more(3)	-	-	-
1977	more(3)	-	-	-	-
1981	many(7)	like(3)	-	-	-
1983	change(7)	traditional(5)	time (5)	group(5)	categories(3)
1984	more (4)	lived (4)	groups (3)	-	-
1985	two(3)	new (3)	-	-	-
1987	American(3)	beef(3)	purchase (3)	represent(3)	-
1988	without(5)	groups (4)	living(3)	different (3)	Europe(3)
1989	class(3)	common (3)	one(3)	Portsmouth (3)	time (3)
1990	same(5)	new (5)	most(5)	university(5)	other(4)
1991	majority(5)	working (4)	class(4)	households (4)	other(4)
1992	culture(13)	material(10)	some(9)	many (8)	like(8)
1993	history(5)	historical(5)	archaeology (5)	university (4)	many(4)
1994	many(14)	living(11)	employed(11)	some (10)	river(9)
1995	cultural(8)	world(7)	social(7)	society(6)	many(6)
1996	century(5)	slave(4)	place(4)	other(4)	material(4)
1997	archaeology(18)	African(18)	past(12)	power(10)	more(10)
1998	other(12)	time (9)	used(6)	lived(6)	few(5)
1999	class(24)	many (21)	working (14)	history (10)	work (8)
2000	enslaved(21)	many(11)	other(10)	color(10)	more(10)
2001	culture(6)	many (5)	killed(5)	history(5)	thousands(5)
2002	material(4)	two (4)	history(4)	many (4)	status(4)
2003	aboriginal(48)	working (22)	pueblo (15)	some(13)	rocks(12)
2004	history(11)	many(10)	presidio(9)	lived(8)	enslaved(7)
2005	aboriginal(39)	native(10)	new(9)	living(8)	pastoral (7)
2006	community(7)	African(7)	past(6)	number (6)	many (6)
2007	used (10)	living(9)	places (8)	landscape(8)	historical(8)
2008	many(3)	living(3)	African(7)	ideas(7)	enslaved(7)
2009	aboriginal(16)	many (8)	landscape (6)	society (6)	indigenous(6)
2010	indigenous(45)	native (14)	many (14)	Spanish(13)	new(11)
2011	homeless(45)	poor(24)	many(22)	class (21)	working (20)
2012	free(60)	color (53)	enslaved (45)	indigenous(29)	African (24)
2013	places(8)	native (6)	movement(5)	aboriginal(5)	white (5)

7.5.7 The use of FAMILY and CHILDREN in HA

As stated earlier in this chapter, FAMILY and CHILDREN are included as keywords to discern whether CHILDREN and FAMILY are associated with gender. In HA, CHILDREN occurs at a rate of around 212 pmw, the second highest rate across all the journals in the corpus. FAMILY occurs at 418 pmw, which is the highest in the corpus and nearly double the rate of the results of all other journals.

The peak use for CHILDREN is 1104 pmw in 1995, and the frequency rate increases over time after this point. The overall frequency (when normed) was similar to that of MAN and HUMAN and higher than the rate of GENDER in HA. Throughout the 1970s there are some null values, and very low scores in the 1980s. There is a relationship between the peak of CHILDREN and FAMILY in 1995, but overall this relationship is negligible. Figure 42 displays the relationship between the words, and their rates across time. It shows that FAMILY consistently occurs at a higher rate over time, with the exception of the years 1987, 1995, 2001 and 2009.

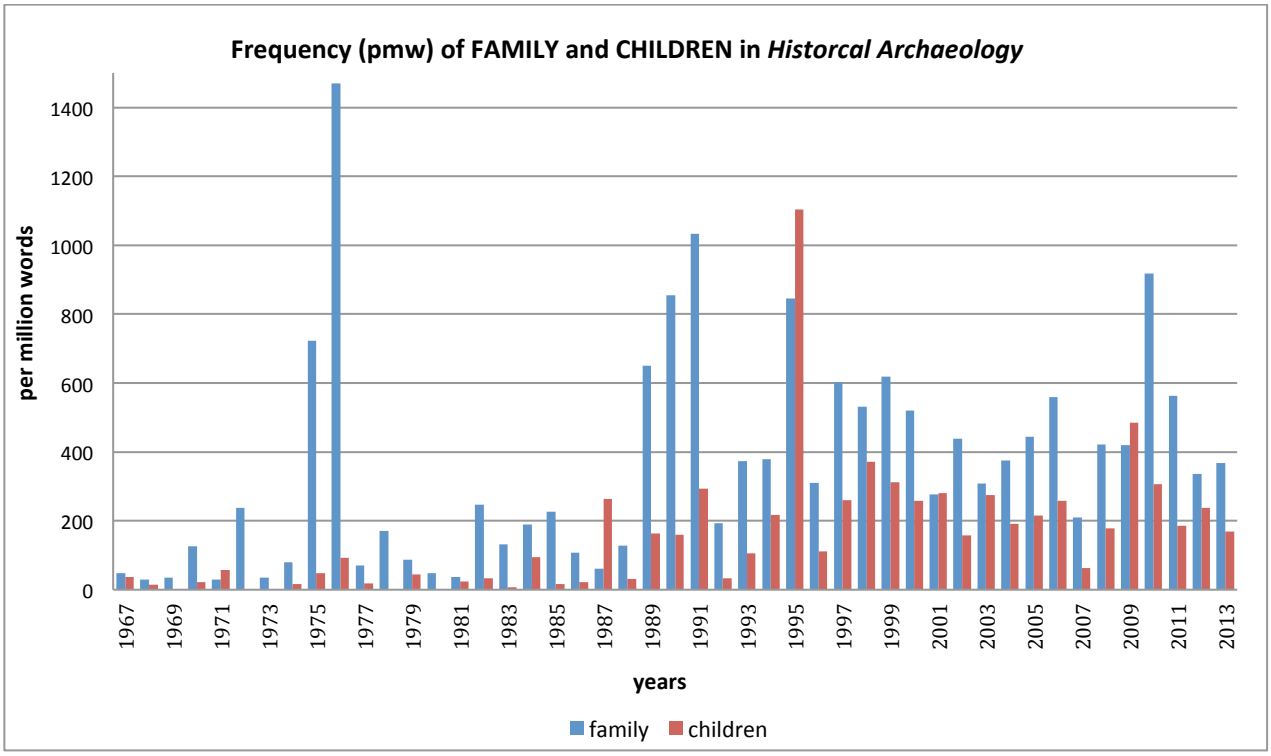

Figure 42: The number (in bar chart form) frequencies of CHILDREN and FAMILY in *Historical Archaeology*

The results for FAMILY are characterised by a series of peaks and troughs, with an increasing trend across time. The lowest scores were in the 1960s and 1970s, with less than 50 pmw. The question emerging from this frequency results is: why does HA have a much higher rate of the keyword FAMILY? The collocation results are provided below in Table 46 for context of use, especially in relation to the concept of a nuclear family, a model prevalent in modern American society.

Table 46: Top five collocations of FAMILY in HA according to MI-score and frequency, by year

FAMILY	1	2	3	4	5
1970	group (3)	-	-	-	-
1975	structure(6)	Mott (6)	farmstead(5)	land(3)	extended(3)
1976	village(3)	some (3)	-	-	-
1977	names (3)	-	-	-	-
1982	history(4)	-	-	-	-
1983	members(3)	-	-	-	-
1985	single(5)	occupied (3)	man (3)	Harris(3)	-
1986	houses(3)	-	-	-	-
1989	block(8)	Portsmouth(4)	related(4)	purchased(4)	papers(4)
1990	farm (12)	type(11)	sheep(11)	life(7)	history(7)

1991	household(16)	life (15)	class(14)	farm(13)	camp(13)
1992	honor(6)	time(4)	unit(4)	family(3)	household(3)
1993	cemetery (15)	family(8)	single(7)	vine(5)	type(5)
1994	Addison (8)	Wager (7)	Black(7)	new(7)	street(7)
1995	home (14)	type (13)	members (10)	women(7)	cemetery (7)
1996	Plains (8)	officers (4)	carver(4)	wealthy (4)	Indian (4)
1997	Washington(25)	Brown(15)	members(14)	papers(10)	title(9)
1998	family (8)	oven(7)	property (5)	one(5)	house(5)
1999	single(12)	home(11)	Russell (9)	members(8)	middleclass(8)
2000	Irish(10)	household (19)	house(8)	creole(8)	one(7)
2001	income(6)	work (5)	pigeon (5)	Black(4)	unit(4)
2002	Schroeder(11)	members(7)	court(7)	one(7)	social(6)
2003	Robinson(10)	Swiss(10)	archaeology (7)	life (6)	part (4)
2004	life(16)	cycle(12)	history(8)	study(7)	households(6)
2005	rental(17)	house(12)	households(11)	new (9)	women (8)
2006	Bush(84)	community(33)	average(23)	extended (22)	members(21)
2007	among(7)	Davenport (5)	royal(4)	provided(4)	organized(4)
2008	immigrant (17)	members(11)	history(9)	single(8)	family (8)
2009	individual(11)	members(19)	plots(7)	inns(7)	house(6)
2010	members(37)	cemetery(31)	family (26)	McWorter(21)	archaeology(16)
2011	members(15)	life(11)	Richeson(10)	land (9)	one (9)
2012	gamble(42)	land(12)	members(11)	archaeology(10)	swan(9)
2013	women (16)	landlord(14)	Cornell(13)	pottery(6)	members (6)

There are three main groups that can be formed from the collocation results, the composition/size of a family, family property and family names:

1) **Composition/type**: group, unit, members, single, one, type, extended, individual, established, new, organized, community, block, immigrant, officers, Irish, Plains, Indian, Black, Creole

2) Property/status: land, landlord, farm, farmstead, house, households, inns, cemetery, plots, rental, camps, street, income, title, papers, purchased, royal, court, wealthy, working class, class

3) Surnames: Mott, Harris, Portsmouth, Addison, Wager, Brown, Washington, Schroeder, Russell, Bush, Robinson, Wilcox, McWorter, Richeson, Davenport, Cornell

In terms of a changing discourse, the word *members* increases as a collocation after 1995. Overall, there are no significant changes in how FAMILY is described or interrogated in HA. There are a large number of papers that discuss particular families in the context of detailed historical analyses of individual house lots or assemblages (see Appendix 3). This likely accounts for the high frequency of the word FAMILY, as much of the analysis revolves around documented residents. There is also some focus on some of the earliest European settlers. The highest MI score occurred with the words *plates* (15.02) followed by *creamware* (14.6), which is related to the interpretation of individual household assemblages. Significant content on FAMILY concerns its size and structure, and as a unit of production. The word WOMEN occurred with FAMILY from the late 1980s to 2013. The context in relation to family is shown in the concordance lines in Table 47, and is related to the critical analysis of women's roles in the domestic and household 'spheres', as well as the effort to make women more 'visible' in the literature.

Table 47: Sample of concordance lines for FAMILY in HA related to collocate *women*

1987		
of life for working women and their	**famil**	ies. As large scale urban
to teach women how to maintain healthy	**famil**	ies and clean homes.
services to working women their	**famil**	ies, and/or men, boys or girls in
1991		
ceramics from This equivalency in the	**family**	and the women's sphere,
the role of women within the	**family**	domesticity was one of the
changing role of women within the	**family**	and the changing ceramic market
1995		
sphere, and the home and	**family;**	women who stepped beyond this sphere
Earth' as the nourisher of her	**family.**	Woman's domain emulated the peace
2005		
For some women, prostitution was a	**family**	business, and the career path from
of 'respectable' women in the two	**family**	assemblages served to suppress tobacco
2013		
revealed efforts of	**family**	members, in particular women,

What cannot be gleaned from the collocation data is a nuanced 'gendering' of discussion of family in terms of male ownership or men as heads of family units. Pronouns were omitted from the collocation data, as explained in Chapter Five. However, a significant trend was observable in the concordance lines, with the words '*his*' and '*family*' regularly occurring together across the HA corpus (a sample of which in shown in Table 48). This is somewhat unique to HA, and can be seen as connected to the identification of individuals (and families) to sites and households. What is interesting is that more often, discussion is about '*his family*' not 'the family' or 'their family'. The discussions often identify individual men, and relegate other associated individuals to being part of his unit, '*his family*'. The males have agency and identity, the females and children do not. Although this is somewhat a reflection of the time periods involved, it is also a consequence of the choice of words used by authors and the patterns of thought that underlie them.

Table 48: Sample of concordance lines for FAMILY in HA related to pronoun 'his'

1970		
would be needed for his own	**family**	That such surplus
which he and his	**family**	came West -they never tell
1976		
contents of the cellar fill with his	**family.**	The closeness of the fill
than needed for just his	**family**	's consumption and in all probability the
1984		
discards of such men and their	**famil**	ies illustrate quite aptly the
the administrator of the oficina and his	**family**	Industrial structures of different
household and his extended	**family**	that likely was com
1988		
as a residence for the innkeeper, his	**family**	and his servants. These
rom 1923 to 1929, then he moved with his	**family**	to Texas. His curiosity
1990		
in the company of his	**family's**	servants and slaves
Great Depression. Although his own	**family**	was comfortably off, he was

a mulatto man and his	**family**	and those of several negro
1995		
Malan set the roots of his	**family**	apostasy there in a speculative
Jersey Governor Walter Edge and his	**family.**	In 1953, Morven was
2005		
died. While an individual and his	**family**	were likely provided for
Dr. William F. Padelford and his	**family**	Other occupants listed in the Boston
site for when he or his	**family**	visited the mill
2013		
home of Aaron Anderson Van Winkle and his	**family**	However, these historical

The collocations for CHILDREN are provided in Table 49.

Table 49: Top five collocations of CHILDREN in HA according to MI-score and frequency, by year

CHILDREN	1	2	3	4	5
1987	domestic(7)	two(4)	education(4)	day(4)	working(4)
1989	block(4)	-	-	-	-
1990	white(4)	-	-	-	-
1991	women(18)	present(6)	men(6)	working(5)	wife(4)
1993	women(5)	lead (5)	wife(3)	-	-
1994	women(18)	American(12)	African(12)	Euroamerican(9)	men(8)
1995	graves(72)	adults(45)	handles(39)	coffin(39)	century (19)
1996	wife(3)	adulthood (3)	-	-	-
1997	women(9)	other (4)	one(4)	grandchildren(4)	more(4)
1998	wife(9)	property (8)	women (4)	shoes (4)	raised (4)
1999	middleclass(15)	values(6)	two(5)	three(4)	New York(4)
2000	number (9)	born (9)	age(8)	women (7)	under (6)
2001	boarders (23)	wife(22)	women(7)	values(4)	school (4)
2002	women(15)	family (3)	-	-	-
2003	women (27)	men(10)	female(10)	two(8)	three(8)
2004	women(10)	two(6)	small(5)	coins(5)	recovered(5)
2005	women(10)	number (7)	two(6)	shoes(5)	children(5)
2006	women(8)	house(8)	men(6)	gardens(6)	death(6)
2007	women(5)	three (3)	men (3)	burials(3)	-
2008	women(7)	wives(7)	school (7)	African (7)	village(6)
2009	women(21)	paradise (15)	toys (14)	class (13)	working(12)
2010	school(11)	two (10)	American (9)	six (6)	parents(6)
2011	women(9)	illegitimate (5)	wife (5)	children (4)	wives (4)

2012	archaeology (18)	material (11)	culture(9)	childhood(9)	wives(7)
2013	women(8)	toys (5)	Cornell (5)	wives (4)	camp(4)

The word CHILDREN occurs most frequently with WOMEN, and thus is part of the one syntactic unit (a noun phrase), giving them the same semantic role in the text. Interestingly, CHILDREN also occurs with '*wife' and 'wives'*, and refers to a family group, such as '*wife and children*' (see concordance lines in Table 50) also denoting use as one unit. The phrase 'men, women and children' also appears in the corpus. There is some differentiation in status in terms of the use of 'wife' that hints at whether children in this context are 'legitimate' or 'illegitimate'.

The highest MI score for CHILDREN was with *coffin* (17.17). The emergent categories primarily concern 'identification' (*two, three, six, number, female, African, white, class, grave, American, Euro-American*), with only minor occurrences indicating performance (*school, education, toys, working, shoes, coins).* CHILDREN also occurs with relationship and kinship terms: *women, wife, wives, parents, adults, men, grandchildren*.

Table 50: Sample of concordance lines for CHILDREN in HA

1987		
numerous soldiers; wives and the	**children**	of these individuals
indicate the presence of either women or	**children**	a fact attested to by the census
child care and trained women and	**children**	for domestic occupations.Public kitchens
1991		
eat dinner with their wives and	**children**	Clearly, Dogway was not a single
become increasingly clear that women and	**children**	were present in logging communities
appropriate training for adult life,	**children**	wages often were essential to
1993		
wife and	**children**	with him
about women,	**children**	and ethnic
1998		
him jailed. Naylor toward his wife and	**children**	at various

elementary education for the village	**children**	and encouraged the individual
2001		
of the remains belonged to women and	**children**	and that the
his Pearl Street lot with his wife,	**children**	and five or six adult apprentices
enough to keep the women and their	**children**	from starving to death
2013		
his wife and	**children**	were left in poverty when he died,
refuge for the Native American women and	**children**	who were displaced after the Rogue River Indian
evidence of cohabitation with their wives and	**children**	even though this was against army regulations.

7.6 Results for *Australian Archaeology*

Across the entire corpus *Australian Archaeology* (AAA) has the lowest normed rates (pmw) for the words WOMAN, CHILDREN, FAMILY, FEMININE, MASCULINE and SEX, reflecting the 'scientific' or processual focus of the journal, with limited content on 'social' archaeology. Research articles from 1974 through 2013 (a total of 1421 articles and 4,435,911 words) serve as the corpus in this section (see Appendix 4).

7.6.1 The use of GENDER in AAA

AAA was first published in 1974, when feminism and gender had already been introduced into wider social commentary. The first publications on gender in archaeology in English did not emerge until 1984. From 1974 to 1984 GENDER did not occur at all, in other words, those wider socio-political changes did not discernibly impact the journal's content. The word GENDER is mentioned once in 1986 and 1988, but 1990 is the first result with any significance. In this year, it is mentioned sixteen times and has a normed result of 124 pmw. From this data it can be assumed that the impetus to publish on gender theory was based on what was happening in archaeology publications abroad, rather than what was occurring at a local level.

The average frequency of GENDER is around 181 pmw compared to SEX, which is approximately 59 pmw. The frequency data of both SEX and GENDER together (Figure 43) show that when GENDER was introduced in 1990/1991, it did not replace or supersede the word SEX, which remains at a constant rate across time. This may indicate that the concept of gender was a non-issue prior to this time, rather than that the word SEX was being used to describe GENDER. Although there appears to be some corresponding increases in both words in 1991, 1994 and 2006, the relationship is negligible. Overall, the use of GENDER in AAA fluctuates, with peaks indicating it has been a topic of significance in only eight years, and one that comes in and out of focus.

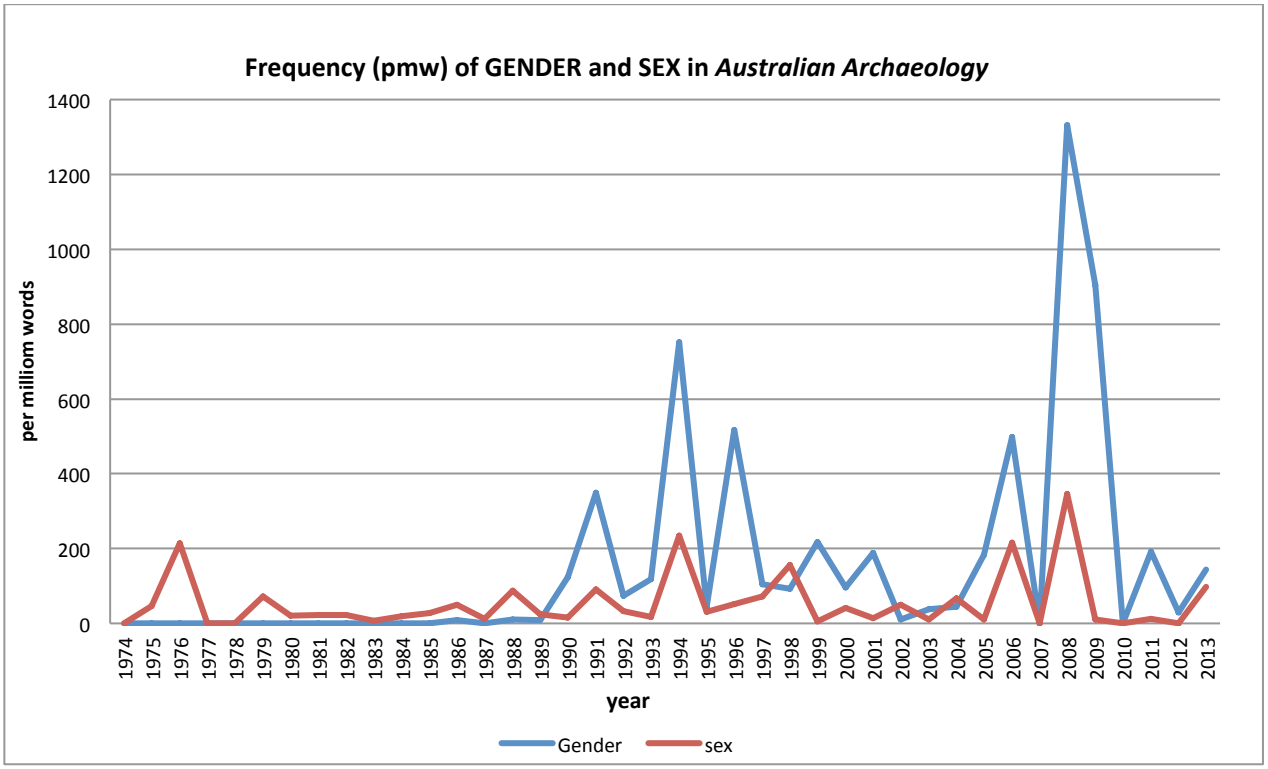

Figure 43: The proportional frequencies of GENDER and SEX in *Australian Archaeology*

In Table 51 below, the top five collocations of GENDER by year, and the frequency of their occurrences are displayed.

Table 51: Top five collocations of GENDER in AAA according to MI-score and frequency, by year

GENDER	1	2	3	4	5
1990	archaeological(6)	record (4)	relations(3)	-	-
1991	studies(7)	archaeology(5)	papers(4)	issue(4)	prehistory(4)
1993	research(3)	-	-	-	-
1994	archaeology(50)	research(13)	women(12)	Aboriginal(11)	archaeological (10)
1996	archaeology(16)	research(12)	relations(7)	under(6)	part (6)
1997	theory(4)	land (3)	-	-	-
1998	knowledge(4)	-	-	-	-
1999	archaeology(9)	material(5)	culture(5)	relations(4)	theories(4)
2000	archaeology(6)	ethnicity (4)	writing(3)	about(3)	-
2001	archaeology(10)	situation(3)	relation(3)	orientation(3)	hegemony(3)
2003	behaviour(26)	evolution(22)	Australia(19)	modern(17)	occupation(15)
2005	rates(4)	race (4)	participation(4)	figure(4)	primary(4)
2006	archaeology(7)	roles(5)	equity(3)	science(3)	-
2008	archaeology(37)	sex(20)	social (17)	origins (16)	women(13)
2009	investigators(14)	grant (14)	archaeology (13)	ratios (13)	composition(8)
2011	status(3)	social (3)	-	-	-
2012	figure (6)	primary(4)	male(4)	rates(3)	participation(3)

In Table 51 it can be seen that there is a dominant theme where GENDER is used in the context of a disciplinary subject, rather than applied to the interpretation of the archaeological record. It occurs most often with *archaeology,* as in '*gender archaeology'*, and words related to this theme include *studies, research, record, archaeologies, knowledge, theory, theories, hegemony, issue, papers, writing, participation, equity, grant,* and *about*. GENDER is also used in relation to issues around sexism and equity for women. The highest MI score was with '*feminist'* (16.17), a word which did not occur with any significance in AA or HA. These results taken together form the view that GENDER is used in AAA as a theoretical concept with a political edge.

Perhaps what is most striking from the data is what is absent, in particular discussions on the gendered division of labour, the identification of gendered behaviours via material culture or the 'gendering' of individuals. In Table 51 no results appear for GENDER with MASCULINE or GENDER with FEMININE. FEMININE occurs a total of four times (once each in 1988, 1990, 1994 and 2008) and MASCULINE six times (once in 1990, 1998, 2004, 2008 and twice in 1994). Due to these low numbers the results for

MASCULINE and FEMININE are not able to be represented graphically with the keyword GENDER, nor do they occur enough times to generate collocation data.

In contrast, the frequency rate for the word SEX stayed constant over the 39 year period. There are minor increases in the 1990s, and several small peaks in use in the years 1976, 1994, 2006 and 2008. The overall frequency is less than for GENDER, but SEX is used more often, and in more issues, especially from 1974 to 1990, when GENDER recorded null scores. So, while GENDER has a higher total number (attributed to more peaks caused by special issues or articles), SEX is used more consistently. The collocations for SEX were analysed and the results are shown in Table 52. The context of use is in terms of 'identification' and human remains, and in terms of factors such as age. The use of SEX is thus most closely aligned to biological sex, with none of the collocations indicating sex in terms of sexuality or sexual intercourse. There are a few instances where discussion concerns depiction in rock art, and in 2008 the term is used in relation to gender theory.

Table 52: Top five collocations of SEX in AAA, according to MI-score and frequency by year

SEX	1	2	3	4	5
1991	identification(3)	-	-	-	-
1994	determination(9)	robusticity(6)	Aboriginal(3)	vision (5)	crania(5)
1997	strikes (3)	born(3)	age(3)	-	-
1998	test(9)	species(6)	second(6)	Identification(6)	designed(3)
2000	age (3	-	-	-	-
2002	age (6)	social(4)	distinctions(4)	-	-
2006	according(8)	universities(6)	Australian(5)	same(3)	-
2008	gender(20)	differences(8)	distinction(5)	between(5)	Western(5)
2013	age(8)	male(7)	-	-	-

7.6.2 The use of MALE and FEMALE in AAA

The words MALE and FEMALE were also compared to GENDER to ascertain any relationship between any or all of these terms. The overall frequency results for MALE and FEMALE are 107 pmw and 90 pmw respectively. Figure 44 below shows the data for the actual word counts as they appeared in each volume. The data is presented in this

manner as the total numbers across the AAA corpus were low and because this format best represents the relationship between the words.

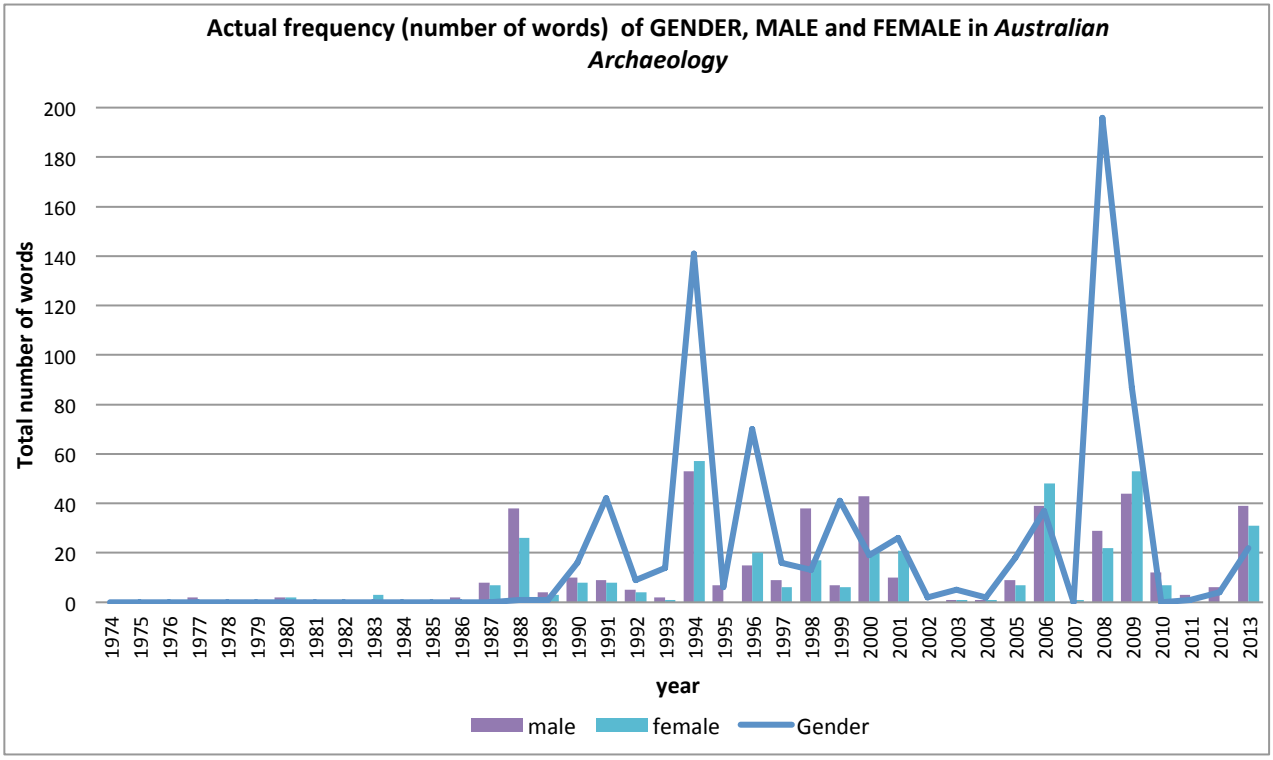

Figure 44: Frequency of keywords GENDER, FEMALE and MALE in AAA

Both FEMALE and MALE enter AAA in 1988, at around the same time as GENDER. There appears to be corresponding rates of use of all three words in most years from 1990 to 2013. MALE and FEMALE co-occur as binomial pairs, except in the years 1995, 2011 and 2012, when only MALE is used. Across the corpus, FEMALE is used more often than MALE in five years.

The collocations for MALE are given in Table 53 below. They show that *female* is the word used most often with MALE, and in the context of 'identification'. After 2000 there is a change in theme where MALE is used to refer to male archaeologists. This aligns with collocations for GENDER, FEMALE and WOMEN, which are also used in terms of equity issues for archaeological practitioners.

Table 53: Top five collocations of MALE in AAA, according to MI-score and frequency by year

MALE	1	2	3	4	5
1988	male(60)	well(4)	life (4)	ceremonial(4)	ratio(3)
1990	might(3)	-	-	-	-
1991	female (3)	-	-	-	-
1994	female(31)	male(8)	skeleton(7)	Pleistocene(6)	crania(5)
1995	skeleton (5)	gracile (5)	Pleistocene(3)	late(3)	King(3)
1996	old (4)	male(4)	hunter(4)	-	-
1997	women(3)	-	-	-	-
1998	female (48)	male(65)	specific(6)	samples(6)	identification(6)
1999	white(3)	perceived(3)	female(3)	domain(3)	black(3)
2000	accounts(3)	existing(3)	provided(3)	historical(3)	age(3)
2001	archaeologists(3	-	-	-	-
2005	female(8)	-	-	-	-
2006	female(19)	archaeologists (10)	rates(5)	publication(5)	academics(4)
2008	female(10)	researchers(5)	bias(4)	bodies(4)	focussed(3)
2009	female(39)	investigators(25)	grants(15)	first(11)	named(14)
2010	figures(5)	-	-	-	-
2012	bichrome(3)	-	-	-	-
2013	female(27)	male(6)	figure(6)	adult(6)	years(6)

The collocations for FEMALE mirror those for MALE, but there are less data that meet the requirements for significance. MALE was the most frequently occurring collocation, and the highest MI score was with *investigators* (17.26). The is a slight change in the use of FEMALE over time, with more content around FEMALE archaeologist and issues of equity in practice after 2000. The results taken together for MALE and FEMALE indicate a strong relationship or use as gender binary terms: *male investigators, female investigators, male and female skeletons, Aboriginal male and female.*

Table 54: Top five collocations of FEMALE in AAA, according to MI-score and frequency by year

FEMALE	1	2	3	4	5
1991	male(3)	-	-	-	-
1994	male(31)	female(12)	King island(10)	mean (7)	Pleistocene(6)
1996	true (4)	success(4)	female(4)	during(4)	fieldwork(4)
1997	site(3)	-	-	-	-
1998	male(48)	female(30)	samples (9)-	test(3)	served(3)
1999	white(3)	male(3)	black(3)	-	-
2001	archaeologists (14)	archaeology(5)	chapter(4)	Europe(3)	-
2005	male(8)	-	-	-	-
2006	male (19)	archaeologists(9)	rates(5)	publication(4)	authors(4)
2008	male(10)	work(4)	non(4)	bodies(3)	archaeologists(3)

2009	male(39)	investigators(24)	grants(16)	first(15)	named(12)
2010	human(5)	figure(5)	beeswax(3)	like(3)	-
2013	male(27)	figure(6)	female(6)	adult(5)	number(4)

7.6.3 The use of MEN, WOMEN and WOMAN in AAA

In contrast to the results for MALE and FEMALE, which are frequently used together and as a unit, WOMEN is used independently of, and at a higher rate than, MEN. Figure 45 shows that MEN is used more frequently from 1974 to 1988, after which point WOMEN is used more often and at an increasing rate in most years. MEN is used consistently at around 200 pmw, with small peaks of 624 pmw in 1992 and 848 pmw in 2006. WOMEN is characterised by large peaks and troughs after 1992, with scores of zero in 1995, 2002 and 2004, but then reaching 910 pmw in 1996, 2921 pmw in 2006 and 1319 pmw in 2008. The pattern indicates that MEN is used constantly as a minor subject, but, when WOMEN is used at a high rate in a year (i.e. because of increased content or a special issue) it is then followed by low rates (where issues have minimal content).

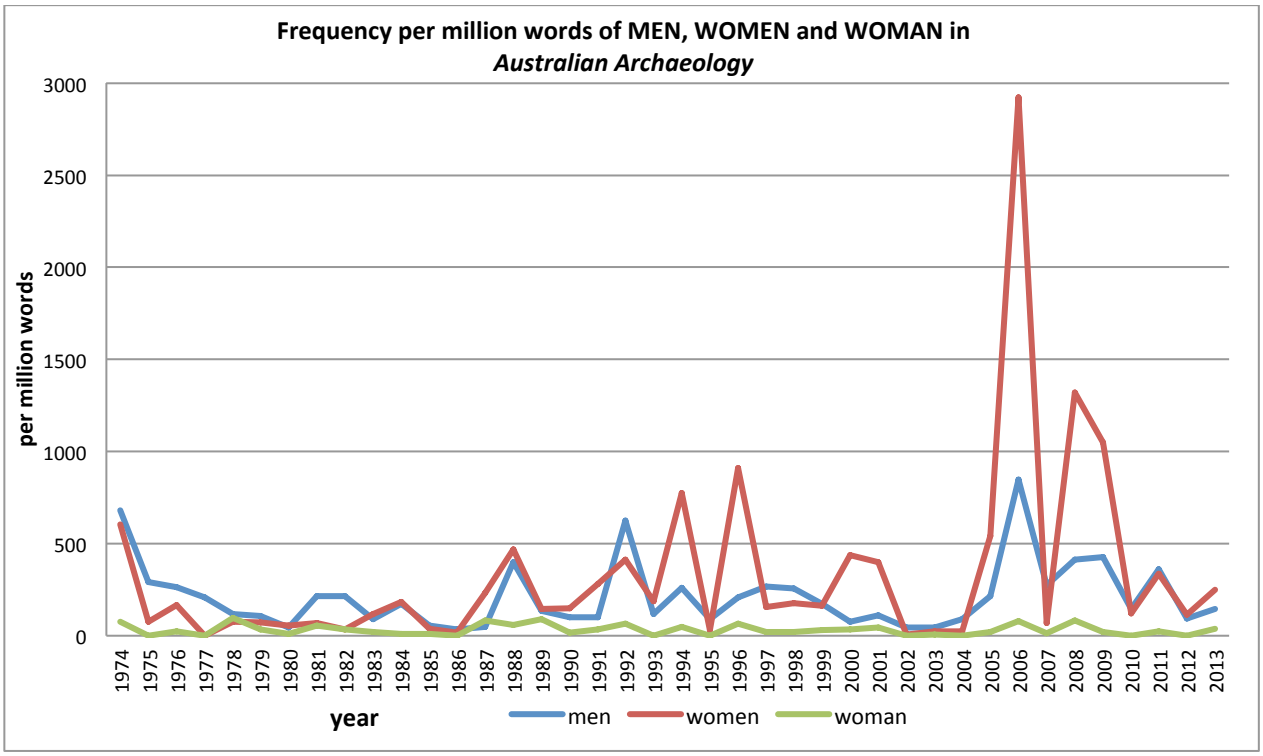

Figure 45: Frequencies of keywords MEN, WOMEN and WOMAN in *Australian Archaeology*

The word WOMAN was included in Figure 45 to gauge if there was a relationship with either MEN or WOMEN, and also as a way of comparing the rates of use between WOMEN and WOMAN. Across time WOMAN is used at a consistently low rate, with all results under 100 pmw. There is a major difference in the frequency of WOMAN with the 'pair' word MAN over time, the two are not used in context with a conjunction, such as 'a man and a woman'.

The collocations for MEN, WOMEN and WOMAN show key differences in the way the words are used in AAA.

Table 55: Top five collocations of MEN in AAA, according to MI-score and frequency by year

MEN	1	2	3	4	5
1975	white(3)	old (4)	site(4)	now(4)	-
1976	women(3)	-	-	-	-
1977	white (3)	-	-	-	-
1982	two(3)	-	-	-	-
1983	three(3)	-	-	-	-
1984	island (3)	-	-	-	-
1986	depart(4)	aboriginal(3)	-	-	-
1988	used(8)	women (6)	control(4)	men(4)	-
1989	two (5)	one(3)	-	-	-
1992	women(10)	worked(9)	used(7)	old(7)	blades(5)
1993	married(5)	camp(5)	women(3)	-	-
1994	women(22)	stone(4)	children(4)	art(4)	work(3)
1996	women(27)	tend(6)	research(6)	distribution (5)	Aboriginal(4)
1997	women(17)	white(13)	Aboriginal (6)	men (4)	many (4)
1998	young(6)	suggestive(6)	men(6)	aboriginal(27)	younger(5)
1999	women (4)	three (4)	British(4)	white(4)	Indigenous(3)
2000	two(3)	-	-	-	-
2002	young(4)	all(3)	-	-	-
2005	women(4)	European (3)			
2006	women(37)	more(9)	rates(8)	publication(6)	equal(4)
2007	hafted(5)	aboriginal(3)	-	-	-
2008	women(21)	gender(4)	between (4)	Aboriginal (4)	things(4)
2009	women(24)	investigators(13)	named(6)	more(6)	grants(5)
2010	women(5)	-	-	-	-
2011	women(8)	teeth (3)	Macassan(3)	-	-
2013	women(7)	young(4)	some(3)	age(3)	more(3)

The semantic categories that emerged for men show that, overall, there is a concern with who MEN 'are' and what they 'did', with some discussion on men in the archaeological discipline as practitioners:

1. Identification

a) relational/kinship/binomial pair: women, children

b) racial/ethnic: white, Aboriginal, Maccassan, Indigenous, British, European, island

c) classification: young, younger, old, age, teeth, two, three, all, some, more

2. Performance: hafted , worked, work, used, control, art, camps, blade, stone

3. Discipline: archaeology, gender, grants, named, investigators, equal, publication, rates, distribution, research

In contrast, the collocations for WOMEN in Table 56 indicate WOMEN are not discussed in terms of the archaeological record, but in relation to equity and bias in the discipline. The highest MI score occurred with *feminist* (14.72), showing that women and gender are used in relation to feminist issues. There are no significant collocation in terms of identification, classification or past activities.

Table 56: Top five collocations of WOMEN in AAA, according to MI-score and frequency by year

WOMEN	1	2	3	4	5
1975	men(3)	-	-	-	-
1990	conference(5)	archaeology(4)	island(3)	-	-
1991	archaeology(15)	conference(14)	prehistory(4)	archaeological(4)	career(3)
1992	men(10)	children(4)	archaeology(4)	presence(3)	observed(3)
1993	conference(11)	archaeology(9)	men(3)	held(3)	-
1994	archaeology(46)	men(22)	critique(15)	gender(13)	Australia(13)
1996	men(16)	work(10)	archaeology(10)	first(9)	field(8)
1997	men(17)	white (9)	black(4)	male(3)	greatly(3)
1998	world (5)	knowledge(4)	emphasis(4)	anthropology(3)	Aboriginal(3)
1999	indigenous(9)	sites(6)	men(4)	visibility(3)	sealing(3)
2000	Australian(12)	role(11)	archaeology(11)	Aboriginal(10)	development(9)
2001	archaeology(10)	university(6)	history(5)	college(5)	European(4)
2005	aboriginal(11)	archaeology(10)	made(5)	noted (5)	feminist(4)
2006	men(37)	archaeology(15)	equity (12)	status (11)	issues (11)
2008	men(21)	archaeology(14)	made(13)	gender(13)	feminist(11)
2009	men (24)	investigators(13)	archaeology(13)	proportion(12)	positions(12)
2010	men(5)	children(4)	-	-	-
2011	men(8)	presence(4)	hand(3)	archaeology(3)	-

1. Identification

a) relational/kinship/binomial pair: men, married, children

b) racial/ethnic: Aboriginal, Australian, Indigenous, white, black, European

2. Subject/discipline: archaeology, conference, archaeological, prehistory, anthropology, field, presence, visibility, observed, feminist, investigators, critique, first, knowledge, emphasis, proportion, positions, grants, university, college, equity, status, issues

3. Performance: work, role, made, sealing

In examining the results for WOMAN, the number of collocations was small: *old* (3), *black* (3), cave (3), *Adelaide* (3) and *Aboriginal (*3). Across AAA, WOMAN is used a total of 135 times. This is low in comparison with WOMEN (1459 times) and MAN (1458 times). The results for WOMEN and MEN are interesting because they are both high frequency terms and occur at the equal normed rates of 328 pmw, but they are not a binomial pair.

The relationship between the two words in AAA is shown in Figure 46. This confirms the words are not used together, and, although their rates are identical, they are used at different times. There is also an inverse relationship between them—as the use of MAN declines the use of WOMEN increases. This is not due to WOMEN replacing MAN, but a scenario in which at the same time that the use of MAN as a generic form of HUMAN declines in popularity the content on WOMEN increases. Both trends can be seen as the response to the introduction of gender-neutral terminology, combined with a focus on women in the discipline.

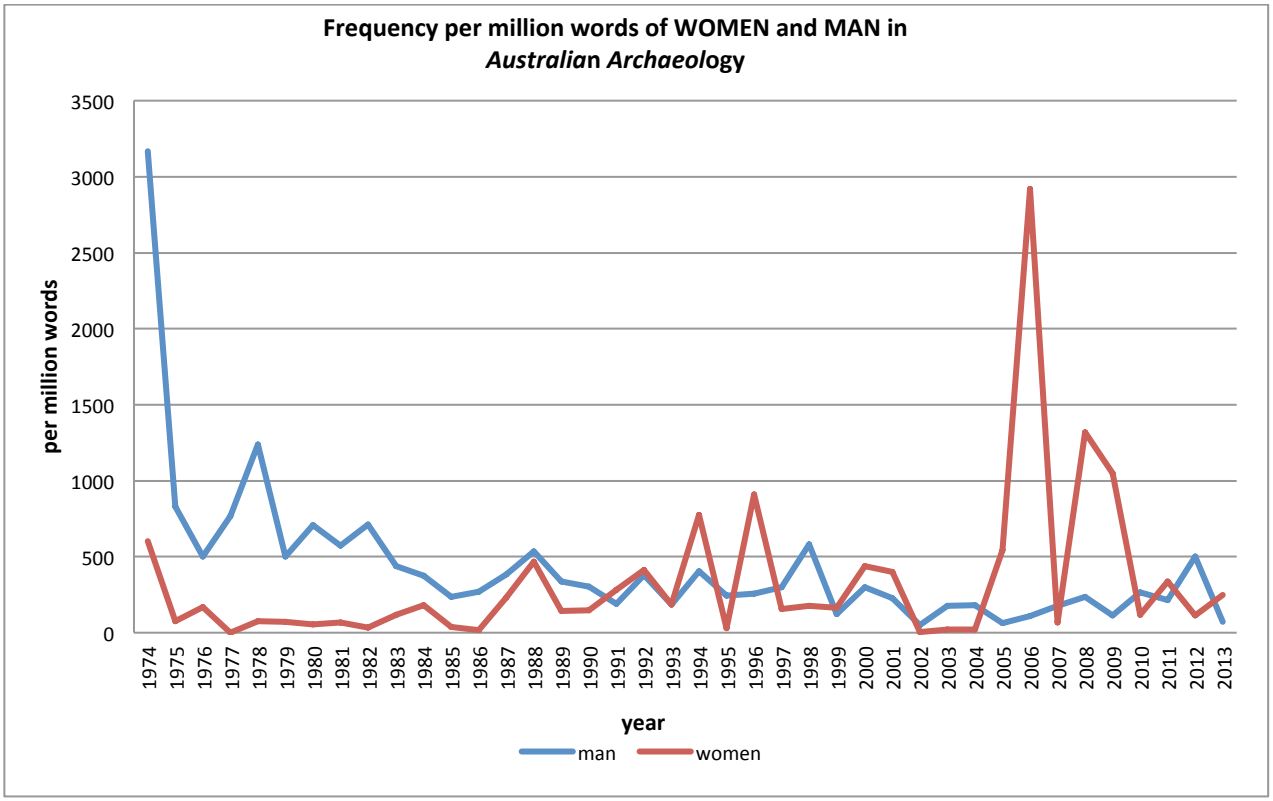

Figure 46: The frequencies of WOMEN and MAN in *Australian Archaeology*

There are clear differences in the use and context of WOMEN and MAN. These difference are demonstrated in the collocation Tables 56 for WOMEN, and 57 for MAN.

Table 57: Top five collocations of MAN in AAA, according to MI-score and frequency by year

MAN	1	2	3	4	5
1975	white(5)	western(5)	Tasmania(4)	site(4)	relationships(4)
1976	one(5)	number(4)	environment(3)	Aboriginal (3)	-
1977	Australia(5)	early(3)	area(3)	-	-
1978	aboriginal(7)	early(6)	island(5)	Australia(5)	Tasmanian(4)
1980	environment(12)	Australia(11)	aboriginal(11)	Tasmania(6)	Pleistocene(6)
1981	megafauna(5)	aboriginal(5)	Tasmania(4)	Pleistocene(4)	early(4)
1982	early(14)	Tasmania(10)	aboriginal(10)	science(9)	shelter(8)
1983	Australia(11)	aboriginal(10)	Tasmania(8)	environment(8)	white(7)
1984	early (6)	dingo(5)	between(3)	Australia(3)	-
1985	Tasmania(4)	aboriginal(4)	-	-	-
1986	Australia(6)	Tasmania(4)	aboriginal(4)	south(3)	central(3)
1987	quaternary(3)	late(3)	environment(3)	Australia(3)	university(3)
1988	Tasmania(5)	cliffs(5)	equity (4)	shell (4)	scraper (4)
1989	southeast(4)	environment(4)	Asia (4)	first(3)	Australia(3)
1990	Australia(4)	Tasmania(4)	himself(4)	aboriginal(3)	-
1991	Tasmania (3)	place(3)	nature(3)	discovering(3)	aboriginal(3)

1992	Australia(7)	rock(5)	art(5)	early(4)	one(3)
1993	environment(3)				
1994	Australia(12)	big(8)	Tasmania(7)	white (7)	past (6)
1996	three(4)	kangaroo(4)	held (4)	shell (3)	Processual(3)
1997	years(6)	ice(4)	cave(4)	young(3)	village(3)
1988	New Guinea(16)	Australia(8)	nature(7)	environment(6)	place(5)
2000	makes(11)	environment(11)	Australia(8)	aboriginal(8)	Pleistocene(4)
2001	pacific(3)	Oceania(3)	Kennewick(3)	hooks(3)	culture(3)
2002	Kennewick(3)	-	-	-	-
2003	Pleistocene(5)	Australia(5)	environment(4)	lake(3)	culture(3)
2004	Australia(3)	-	-	-	-
2005	early(3)	-	-	-	-
2007	early(4)	-	-	-	-
2008	hunter(3)	aboriginal(3)	women(3)	lizard(3)	-
2009	vegetation(3)	impact(3)	-	-	-
2010	aboriginal(4)	land(3)	-	-	-
2011	one(3)	-	-	-	-
2012	artefacts (14)	included(7)	discard6)	identified(6)	activities(6)

The collocations for MAN are unique in AAA as they have a regional focus, shown by the high frequency of *Australia, Tasmania,* and *Aboriginal.* These words, when viewed together as a group and used with others such as *early, white, and culture,* indicate that the meaning of man is applied to humans, not just the male sex. A semantic group is apparent in many words related to environs: *vegetation, Pleistocene, ice, quaternary, environment, megafauna, past, nature, site, area, island, lake, land, place, village, cave* and *cliffs.* This indicates content around human interaction with the environment in deep time.

7.6.4 The use of HUMAN and PEOPLE in AAA

It is apparent in the AAA data that the use of MAN to refer to generic humans declines after 1990. In terms of a 'replacement' word, Figure 46 shows that the word HUMAN peaks in 1990, then declines, but across time the trend line increases from around 750 pmw to 1600 pmw. In comparison, PEOPLE stays at a high, steady rate, increasing marginally from 1000 pmw to 1200 pmw. It is likely that both PEOPLE and HUMAN are used as replacement terms for MAN. Overall, PEOPLE is the keyword used most frequently in AAA, at an average of 1125 pmw, but the rates for both fluctuate and have a number of peaks and troughs.

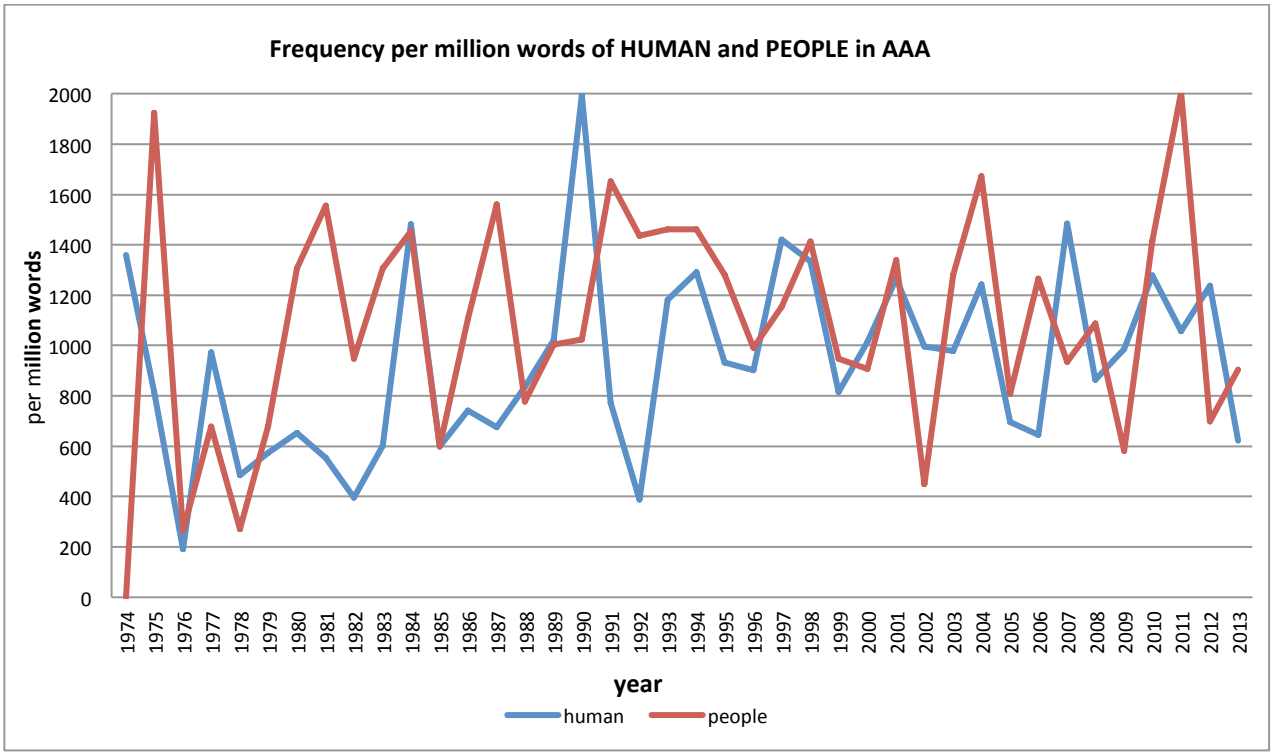

Figure 46: The frequencies of PEOPLE and HUMAN in *Australian Archaeology*

Collocation data can indicate whether HUMAN replaces MAN if the context of their use is the same. Table 58 shows some overlap in environmental words such as *Australia, site, ecology, environment, climate* and *fauna.* However, HUMAN is used most often with *occupation*, so the focus is not so much on what humans did and who they were, but the larger issue of HUMAN occupation of Australia in terms of migration, evolution and colonisation, for example: *origins, origin, occupation, presence, evolution, past, megafauna, Pleistocene, Holocene, Sahul, Australia, prehistoric* and *settlement.* There is also use in terms of *human remains,* with a number of collocations under this theme such as *remains, two, skeletal, material, teeth* and *bone,* and much less content in the 'performance' category: *activity, behaviour, use*.

Table 58: Top five collocations of HUMAN in AAA according to MI-score and frequency, by year

HUMAN	1	2	3	4	5
1975	occupation(12)	material(6)	remains(4)	year(3)	Aboriginal (3)
1977	school(4)	Devil (4)	tooth(3)	presence(3)	occupation(3)
1978	occupation(5)	some(4)	remains(4)	Tindale(3)	notes (3)
1979	two(3)	foot(3)	-	-	-
1980	occupation(10)	anthropology(9)	evolution(8)	point(7)	Australia(7)
1981	occupation(7)	past(5)	origins(5)	Lake(4)	earliest(4)
1982	occupation(14)	evidence(5)	origin(4)	animal(4)	-
1983	occupation(14)	Australia(9)	site(6)	remains(6)	activity(5)
1984	remains(46)	skeletal(22)	behaviour(20)	occupation(11)	bone(8)
1985	occupation(11)	action(9)	behaviour(8)	remains(6)	material(5)
1986	occupation(13)	remains(11)	evidence(7)	skeletal(6)	new(6)
1987	evidence(6)	occupation(5)	figures(5)	site (4)	origin(4)
1988	occupation(20)	remains(14)	evidence(10)	use(7)	skeletal (6)
1990	remains(102)	occupation(23)	skeletal (13)	museum(12)	Australia(11)
1991	occupation(17)	remains(16)	use(7)	sites(6)	Indigenous(6)
1993	occupation(20)	activity(9)	prehistoric(8)	population(8)	ecology(8)
1994	remains(42)	Pleistocene(32)	occupation(28)	Australia(17)	skeletal(15)
1995	occupation(21)	Pleistocene(17)	remains(13)	ecology(9)	skeletal(8)
1996	occupation(22)	behaviour(12)	figures(11)	cave(7)	produced (6)
1997	occupation(26)	behaviour(25)	Australia(13)	Pleistocene(12)	past(5)
1998	occupation(18)	past(14)	language(12)	history(11)	Australia(12)
1999	studies(19)	school(18)	university(15)	environment(14)	Australia(14)
2000	Prehistoric(17)	Australia(17)	occupation(14)	ecology(14)	behaviour(13)
2001	occupation(27)	environment (21)	settlement(17)	archaeology(15)	impact(12)
2002	occupation(28)	Australia(17)	Prehistoric(11)	colonisation(10)	bone (10)
2004	occupation(9)	past(7)	Australia(7)	archaeology(7)-	skeletal(5)
2005	analysis(25)	skeletal(16)	resource(8)	remains (8)	information (8)
2006	remains(6)	megafauna (6)	use(5)	origins(5)	evolution(4)
2007	modern(47)	behaviour(38)	Pleistocene(17)	remains(11)	Sahul (10)
2008	occupation(21)	ecology(13)	evidence (9)	evolution(8)	society (7)
2009	environmental(9)	activity(7)	occupation(6)	interactions (6)	time (5)
2010	figures(18)	occupation(17)	figure(15)	Australia(10)	burials(8)
2011	samples(10)	teeth(6)	values(6)	remains(6)	faunal(6)
2012	evolution(28)	occupation(21)	populations(15)	colonisation (14)	early(9)
2013	analysis(31)	climate (15)	Holocene(13)	change(13)	late(12)

The collocations for PEOPLE are given in Table 59. There is a high frequency and MI scores for HUMAN used with *Aboriginal.* There are thus differences in use: while *human occupation* is a recurrent theme in AAA, it is not seen or described as *Aboriginal occupation* or even *Aboriginal remains.* The predominant use is, however, *Aboriginal people* in terms of describing them, describing working with them, and the relationships between them. In this sense they are the 'other', and juxtaposed presumably to non-Aboriginal people. There are no remodifying words such as male or female. There is a shift to an increased use of *Indigenous people*, but Indigenous does not supersede Aboriginal, rather, the two are used interchangeably.

Table 59: Top five collocations of PEOPLE in AAA according to MI-score and frequency, by year

PEOPLE	1	2	3	4	5
1975	Aboriginal (44)	south(6)	white(5)	archaeologists(5)	our (5)
1977	Aboriginal (4)	numbers (3)	new(3)	contact(3)	-
1979	island(3)	-	-	-	-
1980	Aboriginal (22)	work(5)	schools(5)	number(5)	archaeology(5)
1981	Aboriginal (19)	zone(8)	more(8)	some(6)	land(6)
1982	Aboriginal (16)	many(5)	desert(5)	western(4)	one(4)
1983	Aboriginal (47)	people(10)	other(10)	land(10)	some(8)
1984	Aboriginal (51)	all(12)	island(11)	some(10)	remains(10)
1985	Aboriginal (13)	local(4)	archaeologists(3)	up(3)	many(3)
1986	Aboriginal (51)	more(6)	land(6)	about(6)	representations (5)
1987	Aboriginal (24)	about(6)	season(5)	number (5)	local(5)
1988	present(4)	interested(3)	local(3)	involved(3)	present (3)
1990	Aboriginal (34)	some(8)	local (8)	other(8)	Australia(6)
1991	Aboriginal (57)	indigenous(23)	coast(14)	many(9)	cultural(9)
1992	Aboriginal (42)	groups (13)	used (22)	mungo (7)	worked(7)
1993	Aboriginal (26)	indigenous(18)	some(11)	between(11)	local(7)
1994	Aboriginal (71)	indigenous(28)	between(28)	archaeologists(16)	relationships(11)
1995	Aboriginal (46)	many(9)	non (7)	large(7)	numbers(6)
1996	Aboriginal (29)	other(8)	stone(6)	research(6)	living (6)
1997	Aboriginal (31)	indigenous(15)	between(14)	new(9)	Australia(9)
1998	Aboriginal (49)	many(14)	no(10)	island(10)	about(10)
1999	Aboriginal (102)	indigenous(18)	between(16)	Australians(14)	past(10)
2000	Aboriginal (52)	between(17)	about(8)	white(8)	time(7)
2001	Aboriginal (42)	indigenous(16)	some(10)	rock(15)	local(7)
2002	Aboriginal (19)	heritage(9)	older(8)	indigenous(6)	archaeologists (6)
2003	Aboriginal (25)	range (9)	cape (9)	out(7)	many (7)

2004	archaeology(12)	Aboriginal (9)	not(8)	most(8)	some(7)
2005	indigenous(14)	Aboriginal (10)	archaeology(7)	Sydney(6)	past (6)
2006	archaeology(8)	many (7)	environment(6)	relationships(6)	most(6)
2007	Aboriginal (16)	indigenous(9)	archaeology(8)	more(5)	Australia(4)
2008	Aboriginal (60)	indigenous(11)	sea (6)	rights(6)	food (6)
2009	used(5)	working(4)	more(4)	Aboriginal (4)	time (4)
2010	Aboriginal (65)	between(12)	local(11)	modern(9)	numbers(8)
2011	Aboriginal (50)	indigenous(23)	cultural(9)	between(9)	social(6)
2012	Aboriginal(17)	site(5)	Sahul(5)	local (5)	land(5)
2013	Aboriginal(23)	between (9)	indigenous(8)	time(5)	past(5)

The data from concordance lines indicate that there is some preference for Indigenous to describe current (living) people, but overall the decision seems to be up to individual authorial choice.

Table 60: Sample of concordance lines for PEOPLE in AAA

1983		
race. You people invaded my country. You	**people**	have decided what we must satisfy to regain
important data about the life of the Aboriginal	**people**	in prehistoric times in this country
start with the post-migration gracile or modern	**people**	from the Willandra Lakes.
1993		
work makes it clear that local Aboriginal	**people**	preferentially foraged for plant foods
of the present situation of indigenous	**people**	will make our work better or more
political condition of indigenous	**people**	while it might give a chance to
2003		
of shell artefacts by Aboriginal	**people**	Previous and recent archaeological research
area, there were no Aboriginal	**people**	who claimed descent from the
2013		
speed and alleged finger markings of the	**people**	responsible for them
Birriwilk is of critical importance for local	**people**	linking three art locations
may have developed in this period as	**people**	reinterpreted their changed freshwater landscape.

7.6.5 The use of CHILDREN and FAMILY in AAA

Across the AAA corpus both FAMILY and CHILDREN are relatively low frequency words, both used on average less than 100 pmw. In Figure 47 there is an outlier in the results for CHILDREN, with a result of 664 pmw in the 2005 special volume entitled 'Teaching and Learning in the Australian Curriculum'. The rate for CHILDREN is otherwise around 75 pmw, but this increases over time. FAMILY is used at around 100 pmw, and the rate is consistent across time.

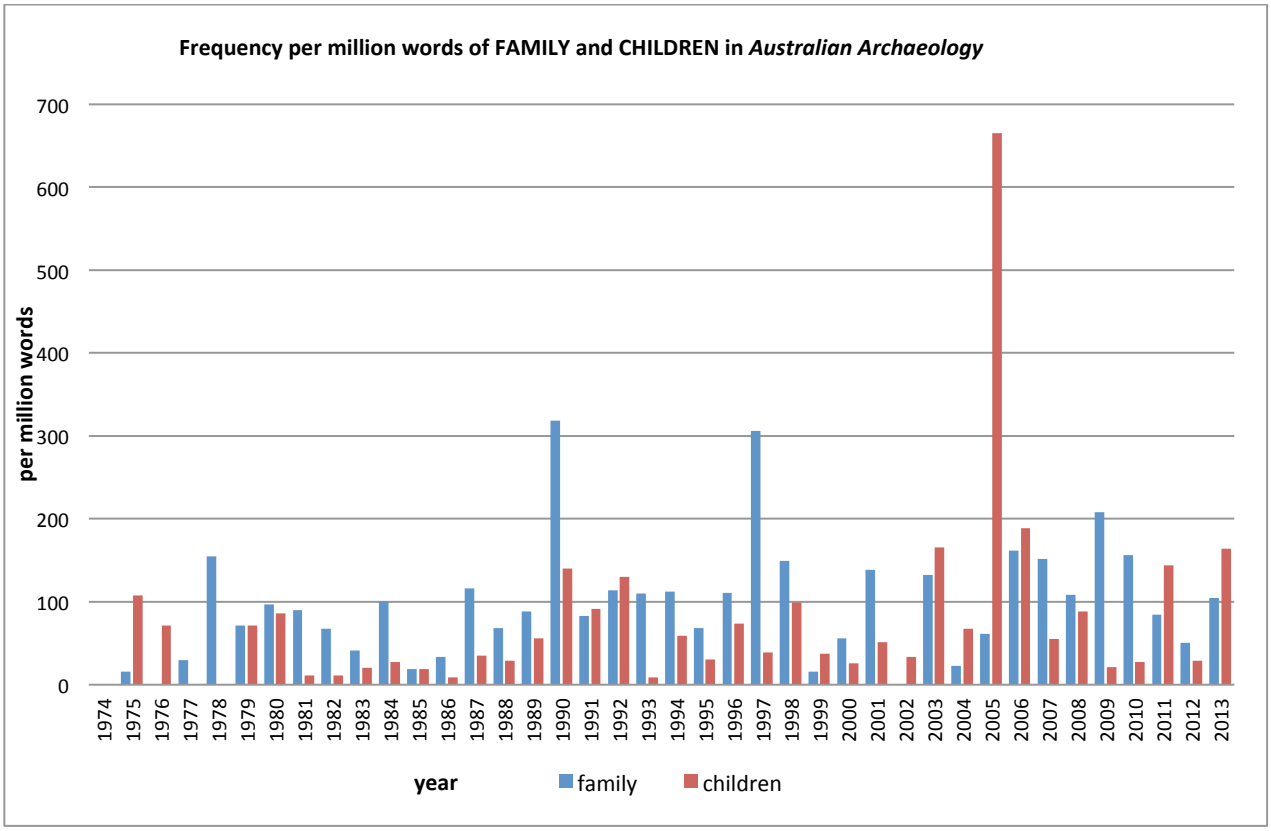

Figure 47: The frequencies of PEOPLE and HUMAN in *Australian Archaeology*

The collocations in Tables 61 and 62 were compared to discern whether or not the use of CHILDREN and FAMILY occurs in the context of one or both genders. They were both words with low numbers of results but some general patterns can be seen. CHILDREN occurs with WOMEN In the sense of 'women and children', where both identities are grouped as one unit. The phrase 'men, women and children' occurs a significant number of times only in 1994. In other contexts, CHILDREN are differentiated, probably

unconsciously, in terms of cultural groups (either Aboriginal or school children, where school children are presumably non-Aboriginal). There are a small number of articles discussing burials of children, but the sex and gender are not specified.

Table 61: Top five collocations of CHILDREN in AAA according to MI-score and frequency, by year

CHILDREN	1	2	3	4	5
1990	books(7)	tribal(4)	aboriginal (4)	writing(3)	Australia(3)
1991	children(2)	age(3)	-	-	-
1992	women(4)	two(3)	-	-	-
1994	women(10)	men(4)	-	-	-
1998	take(3)	after(3)	-	-	-
2003	two (4)	working(3)	class(3)	buried(3)	century(3)
2005	archaeology(23)	school(14)	primary (13)	aged(13)	amongst(8)
2006	women(3)	-	-	-	-
2008	women(3)	-	-	-	-
2010	women(3)	-	-	-	-
2011	hands (3)	-	-	-	-
2013	burials(4)	years (4)	opposing (3)	child(3)	delayed(3)

The main use of FAMILY is in the context of a '*family group*', and the concordance lines below show they are a reference to non-Indigenous families on frontiers and in the context of historical sites. There is some discussion of a particular family-based model for the European colonisation of Australia (proposed by Birmingham and Jeans in 1983), but, oddly, there is no significant context of discussion around Indigenous family structures, individual families or family groups.

Table 62: Top five collocations of FAMILY in AAA according to MI-score and frequency, by year

FAMILY	1	2	3	4	5
1990	Pamu- Nyungan (14)	language(11)	Australia(5)	Austronesian(5)	year(3)
1991	within(3)	-	-	-	-
1992	group(3)	-	-	-	-
1993	groups(3)	-	-	-	-
1994	Robinson(10)	model (3)	-	-	-
1995	species(3)	-	-	-	-
1998	all(3)	-	-	-	-
2000	Robinson(6)	-	-	-	-
2001	listings(8)	group (5)	patriarch (4)	mixture (3)	flats (3)
2003	groups(3)	-	-	-	-

2008	private(4)	state(3)	-	-	-
2010	members (3)	-	-	-	-
2011	people(3)	-	-	-	-
2013	unidentified(4)	level (3)	-	-	-

Table 63: Sample of concordance lines for FAMILY in AAA

1992		
the eventual discovery of the Synnott	**family**	's ancestral home. More particularly, as
this site occupied by Ali and his	**family**	who had since moved to a new
sizes suggest the presence of a mixed	**family**	group at this site, or at least
1993		
new territory beyond the frontier in small	**family**	groups are likely to have placed a
was that owned by the Henry	**family**	In 1935 the Henrys obtained a licence
within living memory of the Speir	**family**	Bottle recycling and Mid-Range Theory
2001		
by Wright to the de Salis	**family**	in 1855. Detailed analysis of the
shows how the patriarch of the	**family**	the Hon Leopold Fane de Salis
estate (the flats) that gave the	**family**	control of the most economically valuable

7.7 Results for the *Journal of Social Archaeology*

JSA started publishing after the rise of feminism, the introduction of gender neutral language, conferences and publications on gender in archaeology (such as Conkey and Spector's influential 1984 paper) and the rise of queer theory. Thus, its results should paint a picture of the recent state and impact of gender in archaeological theory. Given the aims of JSA the hypothesis was that it would have the highest keyword and collocations rates. The JSA corpus is 2,159,701 words and 221 articles, from 2001 to 2013.

7.7.1 The use of GENDER in JSA

The frequency data for GENDER in JSA differs from AA, HA and AAA, as there is a clear decline in use over the time frame examined. The journal commences with its highest rate of 492 pmw in 2001, which can be attributed to many introductory remarks on gender and the topics the journal aims to include. Figure 48 shows this rate drops to 107 pmw in 2011, and 115 pmw in 2013, both of which are lower than for the three older established journals in these years. GENDER is thus used at a similar rate to all journals in the corpus in the 2010s. The hypothesis is supported to the extent that the overall frequency rate for GENDER was the highest in the corpus at 482 pmw, but the negative trend over the timeframe is not indicative of persistent and recurrent use.

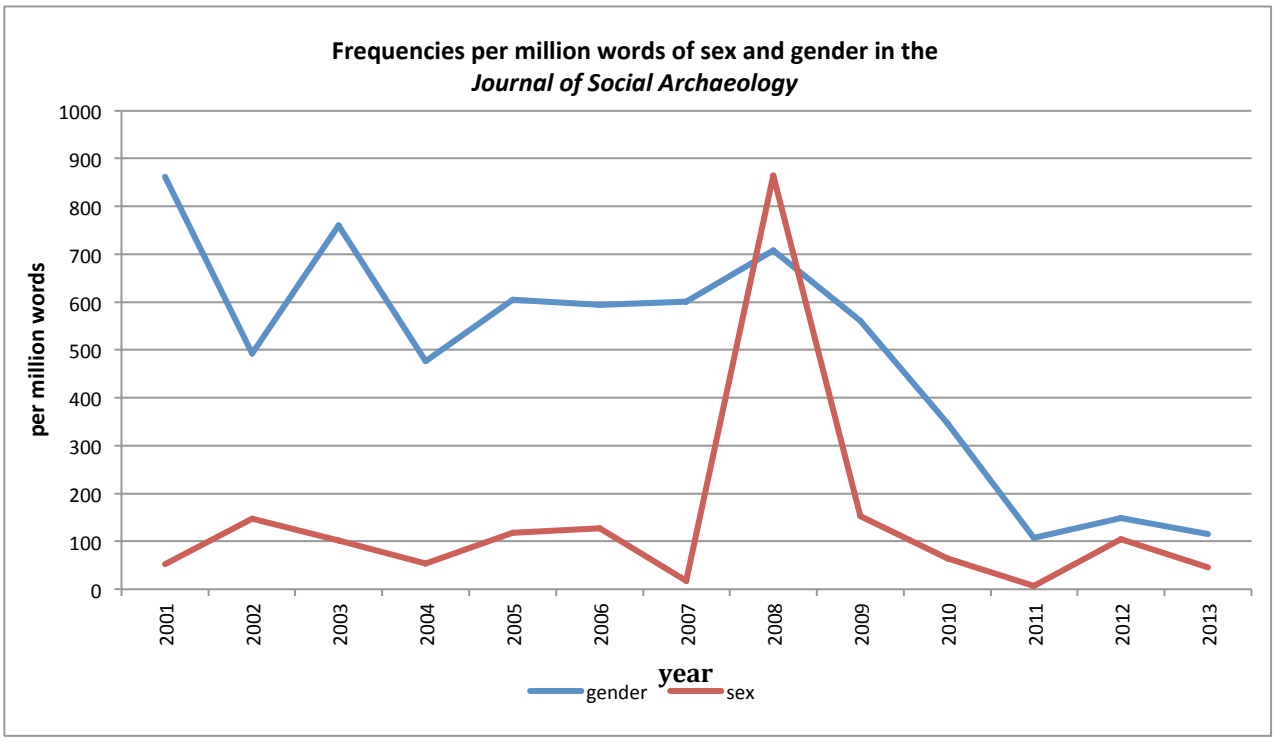

Figure 48: The frequencies of SEX and GENDER in the *Journal of Social Archaeology*

In comparing GENDER to SEX the overall frequency for SEX is significantly less than for GENDER, with a weak inverse relationship in most years (i.e. where the frequency of SEX increases, the frequency of GENDER decreases). This result is as expected, as the concepts are likely to be used in different contexts in the JSA. GENDER is used more often, but SEX stays at a constant rate over the 12 year period, with the exception of

one large peak in 2008. Pamela Geller's article 'Conceiving sex' contributed the increased counts in this year. The average rate for SEX is 146 pmw, also the highest in the corpus, but this rate has been 'bumped up' due to the high number of occurrences in 2008.

The collocation data for GENDER, then SEX is given in Tables 64 and 65.

Table 64: Top five collocations of GENDER in JSA according to MI-score and frequency, by year

GENDER	1	2	3	4	5
2001	archaeology (22)	bias(20)	race(17)	archaeological(15)	praxis(10)
2002	archaeology (13)	class(10)	age (8)	power (7)	category (7)
2003	archaeology (33)	power (10)	studies(8)	archaeological(7)	difference(7)
2004	politics(25)	native(25)	American (19)	roles(14)	culture(7)
2005	Maya(20)	relations(15)	food(15)	identity(13)	power(13)
2006	division (12)	labour(11)	class (11)	archaeology(10)	social(9)
2007	archaeology (22)	African (18)	relations(10)	power(10)	iron (9)
2008	sex (51)	archaeology (19)	sexuality(6)	race(6)	past(6)
2009	archaeology (35)	death(7)	culture (7)	social(6)	mortuary (6)
2010	gift(9)	female(7)	age(6)	burials(5)	sex(4)

Table 65: Top five collocations of SEX in JSA according to MI-score and frequency, by year

SEX	1	2	3	4	5
2002	class(5)	age (5)	archaeologies(4)	ancient(4)	life(4)
2003	gender(6)	age (3)	-	-	-
2009	gender(5)	one (4)	particular (3)	found (3)	differences (3)

The collocations for both keywords are limited due to low MI scores, but some general observations can be drawn from the data. GENDER is used most often with archaeology, and as '*gender archaeology*' as a disciplinary concept or epistemology, but one that intersects with other factors such as race, age and class. It is also used in terms of disciplinary power and bias. Most content in terms of gender in the archaeological record is weighted towards work in North and South America. SEX is used in terms of GENDER where terms are defined in articles, and is mostly used in terms of biological sex.

As JSA is a socially-focused journal, it was also hypothesised that the words FEMININE and MASCULINE would be used with relative frequency, as they are common concepts in terms of social gender, sexuality, queer archaeology and related topics. The results refute this hypothesis, as there were no collocations for GENDER and FEMININE or MASCULINE. Further, the data in Figure 49 show that the concepts are not used often and are not linked in the JSA. The actual number of times FEMININE was used peaked at seven times in 2006, and fourteen times for MASCULINE in 2002, both of which are very low for the entire corpus. The use of both words declined after 2010. There are no collocation results for either word, as no occurrences (when they did occur) met the criteria for significance. The concordance lines for FEMININE and MASCULINE, however, do provide some insight into the context of use of these words in JSA. MASCULINE is used in the context of activities, sexuality and bias, as well as in terms of criticism of the masculine 'gaze'. FEMININE is surprisingly obscure in light of the journal's avowed themes, and is used in the analysis of women's roles/work and 'feminine' imagery.

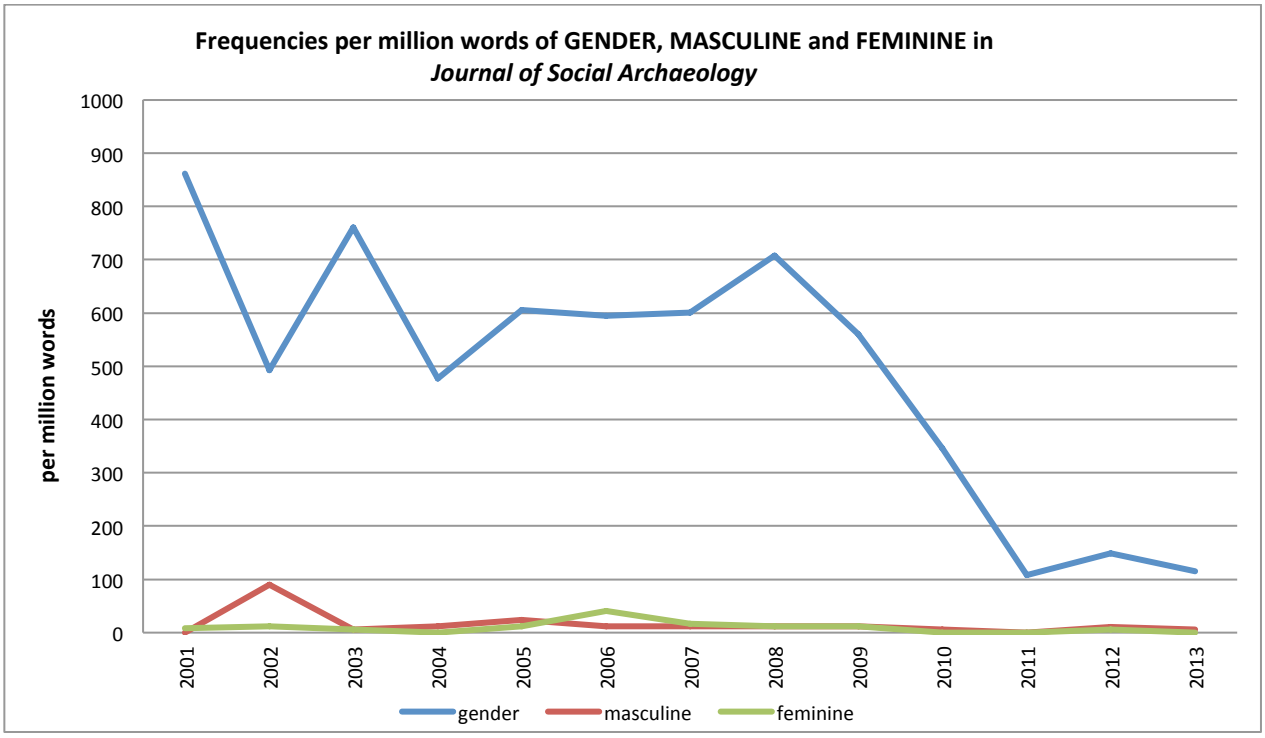

Figure 49: The frequencies of FEMININE, MASCULINE and GENDER in the Journal of Social Archaeology

7.7.2 The use of FEMALE and MALE in the JSA

While the keywords MASCULINE and FEMININE are not used often nor with GENDER in JSA, there is some connection between FEMALE, MALE and GENDER. Figure 50 shows that in 2004 the number of times that GENDER and FEMALE were used was identical (80 times), presumably in the context of '*female gender*'. In the same year MALE was used 48 times, so just over half as often. This seems to be the case from 2001 to 2008, from which point all three words decline and are used a similar low number of times. MALE is only used three times in 2003 compared to 127 for GENDER, and eight times in 2011 compared to GENDER's sixteen times. FEMALE is used more often than MALE, at 241 pmw compared to 185 pmw. The use of FEMALE stays constant over time, as shown by the linear trend line in Figure 50. MALE increases slightly and GENDER declines sharply.

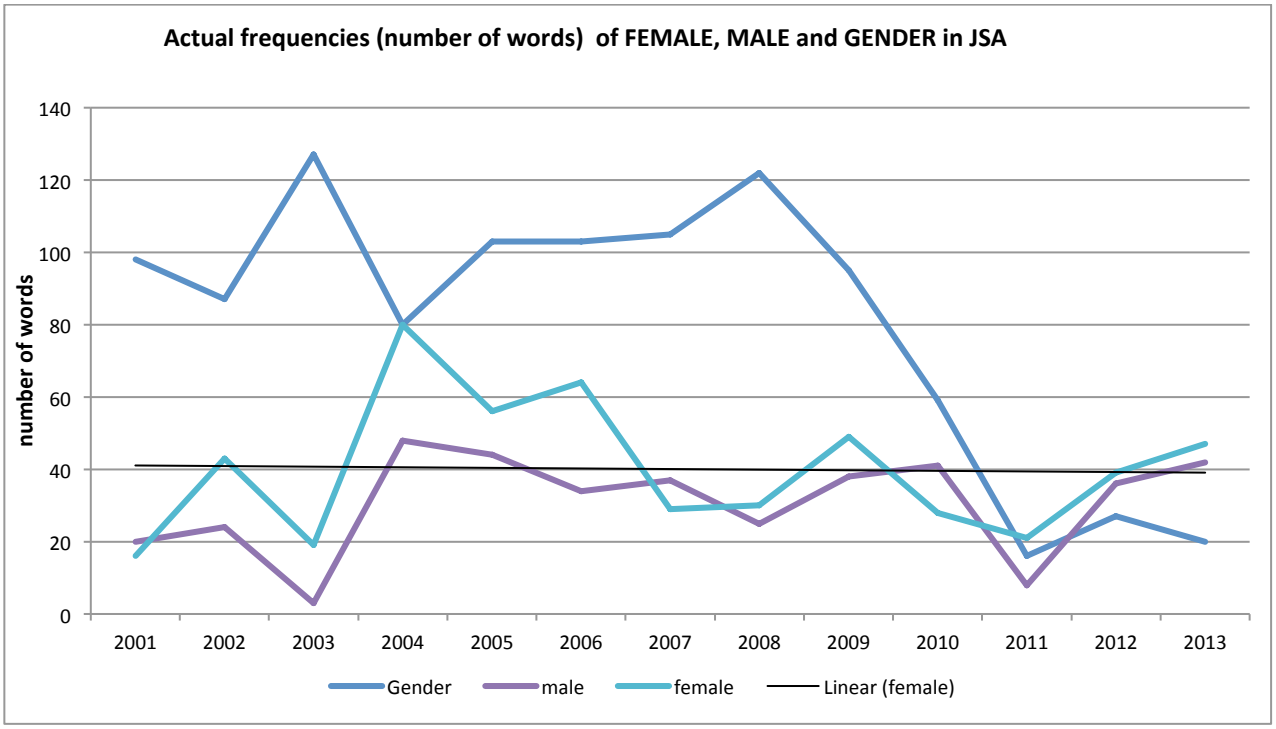

Figure 50: The actual frequencies (number of words) of FEMALE, MALE and GENDER in the *Journal of Social Archaeology*

The collocations for MALE and FEMALE are shown in Tables 65 and 66 below.

Table 65: Top five collocations of MALE in JSA according to MI-score and frequency, by year

MALE	1	2	3	4	5
2001	female(7)	-	-	-	-
2002	female (5)	subjects(3)	representations (3)	-	-
2004	female (13)	adult(12)	house (5)	burials(5)	convicts(4)
2005	female(22)	greater(5)	consumption(5)	sex(4)	classic(4)
2006	female (18)	characteristics(4)	-	-	-
2007	female (6)	sites(4)	persons(4)	identities(4)	versus (3)
2008	female (14)	binary (4)	probable(4)	women(3)	-
2009	gaze (14)	female (8)	one (4)	tombs (3)	GIS (3)
2010	female (11)	burials(9)	weapon(4)	gender(4)	drinking(4)
2012	female (12)	no (6)	gaze(4)	individuals(3)	buried(3)
2013	female (21)	name(7)	human(5)	used(3)	-

Clearly MALE is used most frequently in terms of the collocation *female.* This confirms that when MALE is used it is always in the context of the relationship to female, and as a binomial pair. There is one slight exception in 2009 where the 'male gaze' is discussed

more than 'male and female', but FEMALE is the next most significant result. Other themes indicate some discussion around human remains and criticism of binary gender models that favour males in archaeology. The results also show that *male and female* is used 120 times, while *female and male* appears only 17 times. This is a very strong patterning of Baker's (2014) male 'firstness'.

FEMALE is used more often than MALE and the collocations show that the times when it is used independently to MALE are in the context of iconography and human remains. There is some discussion around the *female body*.

Table 66: Top five collocations of FEMALE in JSA according to MI-score and frequency, by year

FEMALE	1	2	3	4	5
2001	male (7)	-	-	-	-
2002	body (9)	figures (5)	male (5)	sex (3)	representations (3)
2003	subject (3)	style (3)	representations (3)	historical(3)	-
2004	figures(15)	male(13)	relatives (11)	adult(10)	blood(9)
2005	male(22)	status(7)	power(6)	classic(5)	Maya(4)
2006	male (18)	deities(8)	figurines (5)	gendered(5)	textile(4)
2007	male (6)	persons (6)	historical(4)	figures(4)	contemporary(3)
2008	male (14)	binary (4)	probable(4)	pelvis(3)	one(3)
2009	tombs(8)	male(8)	identity (6)	gaze(3)	awls (3)
2010	male(11)	gender(7)	interred(3)	inhumation(3)	burials(3)
2011	body(5)	bodies(5)	links (3)	experience(3)	earth(3)
2012	male(12)	burial(5)	forest(4)	space(3)	-
2013	male(21)	one(5)	expression(3)	high(3)	elite(3)

7.7.3 The use of MEN, WOMEN, WOMAN and MAN in the JSA

In the JSA corpus WOMEN is used at an average frequency of 585 pmw, which is more often than the word GENDER (482 pmw), its 'pair' word MEN (299 pmw), and also the words WOMAN (91 pmw) and MAN (225 pmw). The word count results for WOMEN, WOMAN and MEN are shown in Figure 51. The actual counts are used here, as the numbers are smaller and the style is more simplified than the normed counts. The results shows that, although WOMEN is used more times overall, all three keywords decrease over time, with WOMEN declining in use most sharply of the three. There is a weak relationship between WOMEN and MEN, and no discernible relationship to

WOMAN. The results for MEN fluctuate from 2001 to 2006, with two main peaks in 2002 and 2004, after which there is a steady decline in use. Both MEN and WOMEN merge in the word counts for 2011, 2012 and 2013, and are likely to be used as a binomial pair in these years. MEN is used at a similar rate to MAN, and WOMEN is used overall at a frequency rate that more closely approximates that of GENDER than MEN.

WOMAN occurs very minimally across the corpus, being used fewer than ten times a year in four volumes. It is used less than half as often as MAN. This indicates the subject of 'a woman' is used in a very different way to 'a man' and the unit 'man and woman'. The subject of a woman in the archaeological record is also not as popular as 'women in archaeology'.

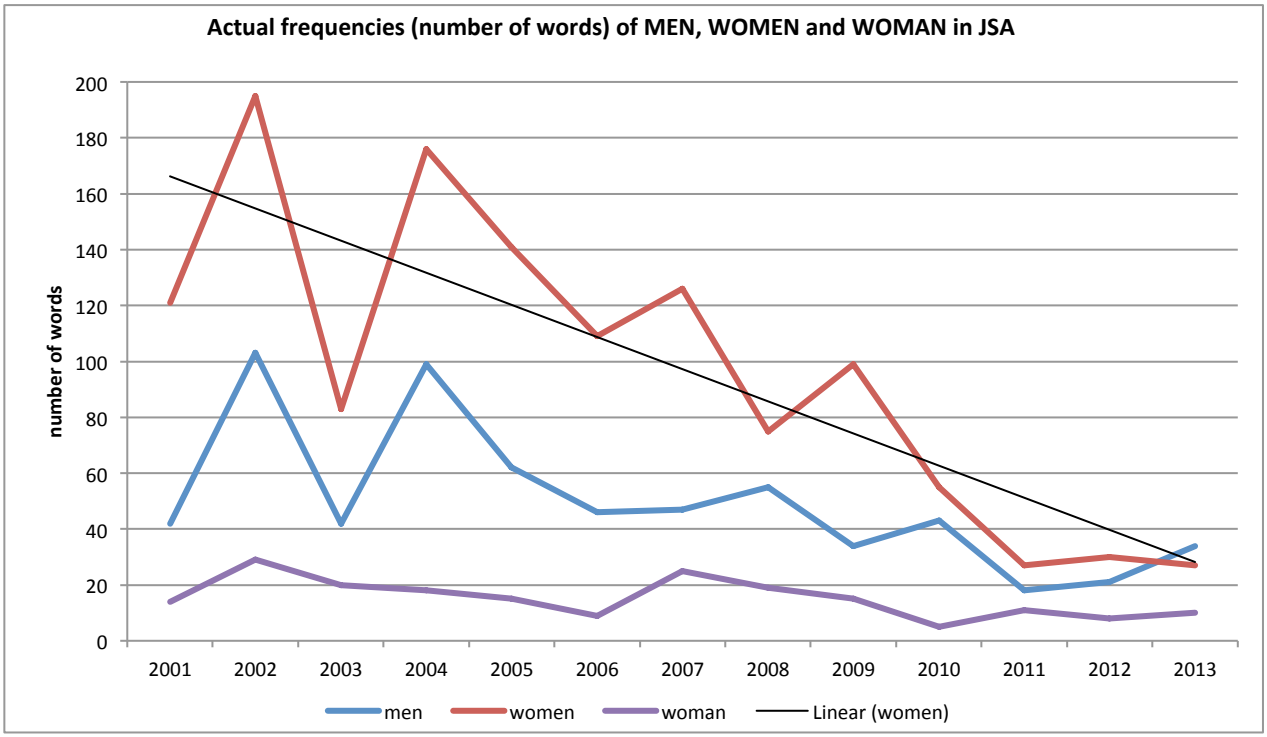

Figure 51: The actual frequencies (number of words) of WOMEN, MEN and WOMAN in the *Journal of Social Archaeology,* with trend line for WOMEN

There may also be a relationship to the word WOMEN and the concept of 'gender archaeology' that can be verified by comparing data for GENDER and WOMEN. Figure 52 shows the rates of WOMEN and GENDER. Figure 52 also shows that there is a distinct relationship between the rates of decline from 2009 to 2013, when WOMEN and

GENDER are used almost identically. Prior to 2009 there is more fluctuation and in 2002 and 2004 the relationship is weakest.

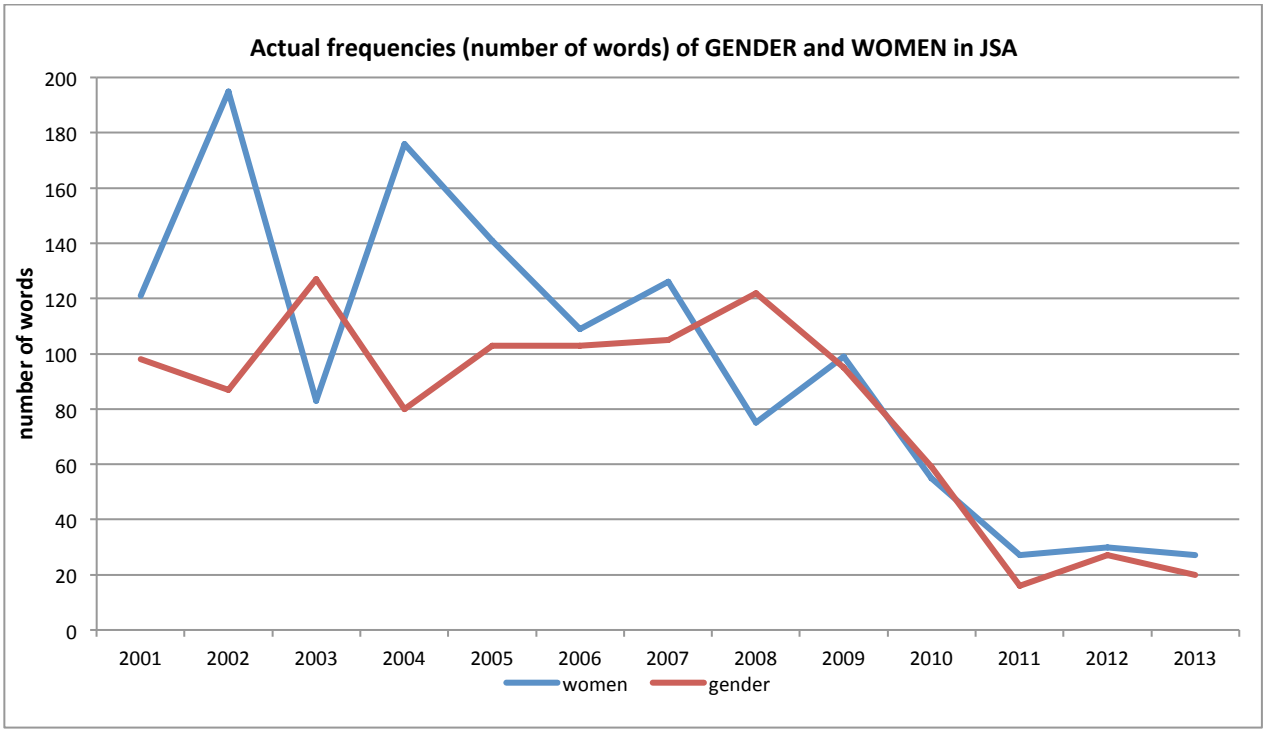

Figure 52: The actual frequencies (number of words) of WOMEN and GENDER in the *Journal of Social Archaeology*

The collocation results for WOMEN are shown in Table 67. The highest MI score occurred with the word *rock* (as in in rock art), and most frequently with MEN. There is some collocation with *archaeology, engendering* and *prehistory,* indicating the word is used as a unit 'men and women' and additionally under the theoretical umbrella of gender archaeology.

Table 67: Top five collocations of WOMEN in JSA according to MI-score and frequency, by year

WOMEN	1	2	3	4	5
2001	black (44)	white (14)	men(10)	blacks(10)	archaeology(9)
2002	men(31)	representations(5)	art (5)	Spanish(3)	rock (3)
2003	archaeology (12)	prehistory (8)	past (7)	men(6)	engendering(6)
2004	men(48)	native(28)	children (13)	new(11)	married(8)
2005	Maya(20)	men(19)	central(11)	ancient(11)	prehistory(8)
2006	men (19)	Maya(11)	work (9)	social(8)	production(8)
2007	men (12)	stated(10)	production(9)	wives(7)	other(7)
2008	men(22)	clothing (7)	children (6)	stones(5)	faces(5)

2009	men(22)	between(14)	archaeology(12)	awls(6)	tombs (5)
2010	men(12)	native(11)	households(5)	children(5)	older(4)
2011	associated(6)	men(4)	children(4)	lack(3)	-
2012	two(3)	social(3)	interred(3)	archaeology(3)	animals (3)
2013	men(4)	-	-	-	-

The collocations for MEN shown in Table 68 reveal a strong relationship with WOMEN. So, in most years MEN occurs as 'men and women'. Other patterns in use are with race: *Chinese, Aboriginal, Maya, Spanish, black, white*. The highest MI score was with *young* (15.69).

Table 68: Top five collocations of MEN in JSA according to MI-score and frequency, by year

MEN	**1**	**2**	**3**	**4**	**5**
2001	women (10)	white(9)	blacks(9)	may(3)	enslaved(3)
2002	women (31)	Aboriginal(11)	points(8)	children(5)	appear(5)
2003	women (31)	figures (5)	white(5)	two (3)	story (3)
2004	women (48)	native(14)	tobacco(12)	married(6)	house(5)
2005	women (19)	north(8)	status(8)	made(4)	consumption(3)
2006	women (19)	Maya(5)	hunt (4)	game(4)	classic(3)
2007	women (12)	upper (8)	middle(8)	social(4)	focus(4)
2008	women (22)	black (8)	years(5)	white(4)	dress(4)
2009	women (22)	incidence(5)	figure (4)	children(3)	-
2010	women (12)	great(5)	Chinese(4)	Spanish(4)	called(3)
2011	women (4)	medicine(4)	children (3)	-	-
2012	farms(4)	concern(4)	-	-	-
2013	young(6)	women (4)	meat(3)	-	-

The keyword WOMAN was used infrequently in JSA so the collocation data is minimal. In 2001 there was a significant relationship with *one* (3), in 2002 *great* (5) and *burial* (4), 2007 *stated* (3) and *one* (3), 2008 *man* (3), and 2009 *playing* (4), *man* (3) and *awl* (3).

The collocation MAN occurred with WOMAN in two years. Figure 53 shows that MAN is used less than, but at a similar frequency to MEN, as opposed to WOMAN. There appears to be related increases in 2002, 2007 and 2013. MAN has three peaks, the largest of which is in 2007 when it is used 124 times. There is a decline after this, dropping to only 12 occurrences in 2010.

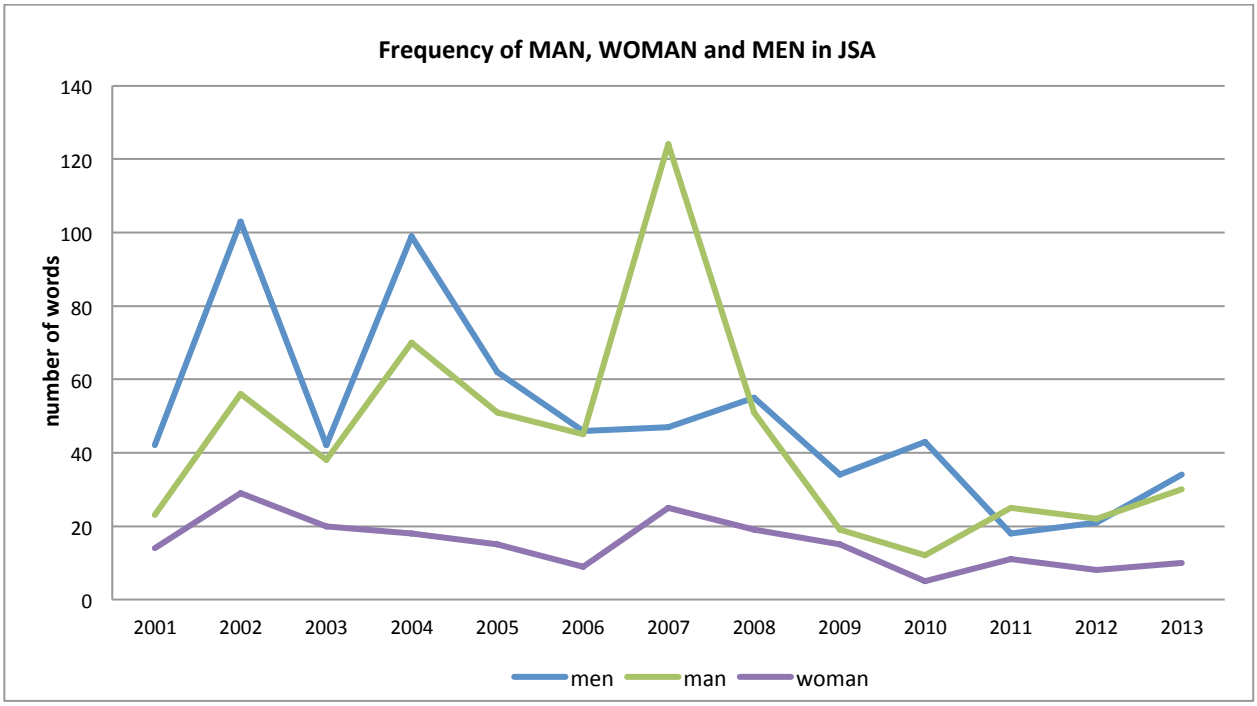

Figure 53: The actual frequencies (number of words) of WOMAN, MAN and MEN in the JSA

The collocations for MAN are shown in Table 69. MAN is infrequently used as the binomial pair of WOMAN. The highest MI score for MAN is with *spirit* (14.8) and 69 times with Kennewick. Given the small number of significant words, and the fact that they are not repeated, it is difficult to draw patterns in use. There are, however, some grouping that are able to be made from the results:

environment: *museum, world, cave, prehistoric, primeval, environment*

performance: *great, educated, battle, works, nationalist, colonialist, playing, first*

race: *American, Indian, white*

Table 69: Top five collocations of MAN in JSA according to MI-score and frequency, by year

MAN	1	2	3	4	5
2002	great (5)	woman(4)	burial (4)	-	-
2003	first(3)	journal(3)	-	-	-
2004	Kennewick (28)	white(8)	new (6)	American(5)	battle(5)
2005	Indian(8)	environment(3)	culture(3)	-	-
2006	Kennewick (5)	prehistoric(4)	archaeology (4)	primeval (3)	works(3)
2007	spirit (52)	cave(52)	Kennewick (36)	remains(12)	case(12)
2008	New York (7)	nationalist (4)	colonialist(4)	archaeologies(4)	educated(3)
2009	playing(6)	new(4)	woman(3)	peace(3)	-
2011	museum(4)	-	-	-	-
2013	world(3)	-	-	-	-

7.7.4 The use of HUMAN and PEOPLE in JSA

PEOPLE is the keyword used most in JSA, and its normed rate of 1589 pmw is also the highest score of all results across the corpus. HUMAN is used 923 pmw, which is higher than the other keywords in JSA, but lower than other journals in the corpus. This is reflective of the journal's 'social' theme, whereby there is more content on subjects in the present and less on themes such as the scientific analysis of human remains. Figure 54 shows that there is a slight decline in the use of PEOPLE over time, despite a peak of 2752 pmw in 2011. There is also an increasing trend of HUMAN. When these results are viewed in terms of the decline in use of the other keywords, these trends may indicate that there is a change in the journal's focus in more recent years.

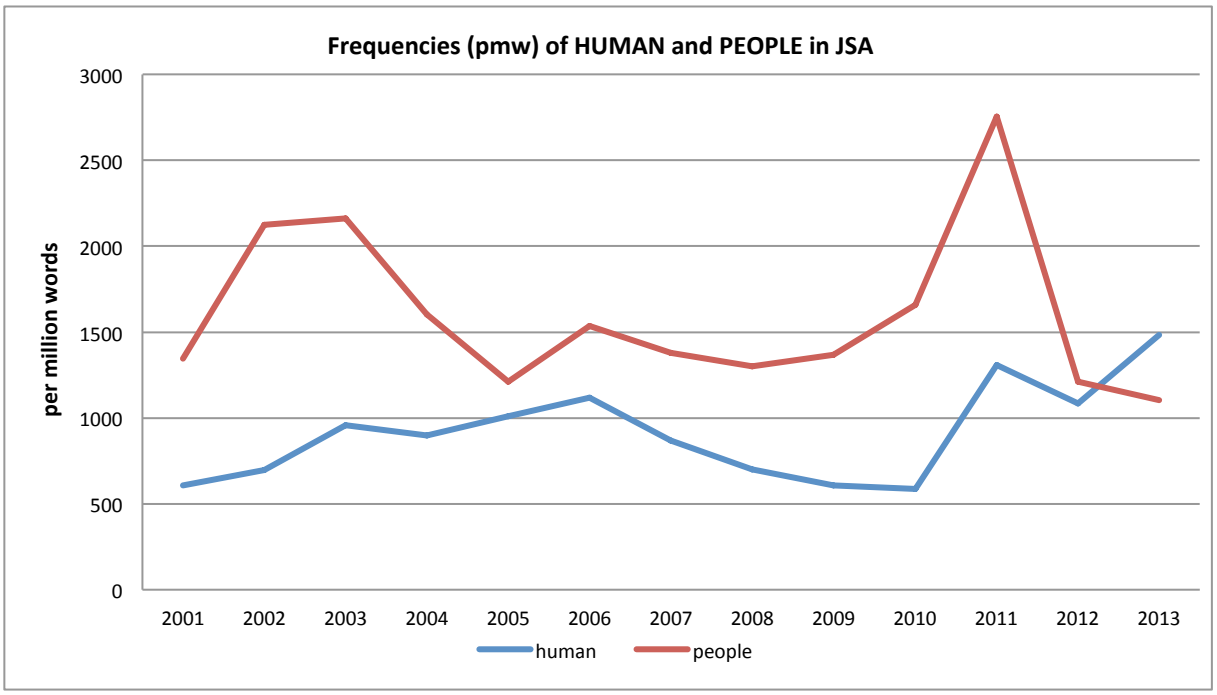

Figure 54: The frequencies (per million words) of HUMAN and PEOPLE in the *Journal of Social Archaeology*

The collocation results for PEOPLE and HUMAN (Tables 70 and 71 below; for total concordances see Appendix 5) demonstrate no significant correlation with the theme of gender, nor with the other selected keywords. PEOPLE is used most often as a noun modifying another noun, and in the context of particular cultural groupings, e.g. Indigenous people. The relationship between HUMAN and the words *places, things* and

objects is unique to JSA.

The highest MI score for PEOPLE was with *Aboriginal* (13.1) and for HUMAN *disposition* (12.83).The trends that emerge from the results show that HUMAN is used as a noun modifying other nouns, with a high number of words in the 'identifiers' group, and most discussion is around *remains, evolution* and *repatriation*. There is an increase in terms such as *Kennewick, indigenous, remains, rights* and *native*, with both HUMAN and MAN reflecting content on repatriation and NAGPRA. This theme did not emerge in AA or HA.

Table 70: Top five collocations of PEOPLE in JSA according to MI-score and frequency, by year

PEOPLE	1	2	3	4	5
2001	enslaved (15)	indigenous(12)	place(6)	native(6)	Bahamian(5)
2002	Aboriginal(48)	different (19)	not(17)	many(17)	space(14)
2003	Aboriginal(33)	world (21)	not(18)	local (12)	places (11)
2004	objects (11)	animals(11)	relationships(10)	places(10)	native(10)
2005	Aboriginal(24)	things(14)	social(11)	indigenous(8)	many(8)
2006	indigenous (20)	cultural (15)	local (14)	Aboriginal(12)	time(11)
2007	white (20)	rock (17)	places(15)	water(12)	red(11)
2008	poor (19)	university(17)	shirts(17)	past(9)	between(9)
2009	local (18)	house(11)	Jewish (10)	other(9)	power(8)
2010	indigenous(28)	colonial(18)	past(12)	native(12)	young(12)
2011	local (32)	objects(23)	social (22)	other (21)	affected (18)
2012	objects(14)	things(12)	places(10)	other (9)	different(9)
2013	indigenous(21)	things (12)	not(11)	places(10)	Aboriginal (8)

Table 71: Top five collocations of HUMAN in JSA according to MI-score and frequency, by year

HUMAN	1	2	3	4	5
2002	life (10)	archaeology(9)	social(8)	space(7)	societies(6)
2003	sacrifice (30)	beings(11)	remains(11)	life (10)	disarticulated (9)
2004	remains (68)	objects(19)	American(16)	beings(13)	native(12)
2005	remains (24)	space(10)	rights(10)	material(10)	bone(9)
2006	evolution (15)	behaviour(13)	social (12)	modern(10)	societies(10)
2007	remains (64)	American (16)	repatriation(10)	objects(7)	native(7)
2008	remains (23)	animal(12)	bone(11)	anthropology(8)	skeleton(7)
2009	evolution (9)	agency(7)	conditions (5)	history(5)	geography(4)
2010	societies (11)	remains(10)	experience(10)	past(6)	new(6)
2011	non (35)	rights(21)	other(17)	animal(14)	actors(13)
2012	remains(24)	burials(20)	non(17)	agency(16)	objects(11)
2013	remains(77)	rights (24)	animal(18)	form(17)	heritage(14)

7.7.5 The use of CHILDREN and FAMILY in the JSA

The collocation and frequency data in this section aim to discern whether CHILDREN and FAMILY are associated with gender or gender bias in JSA. In terms of frequency, CHILDREN occurs on average 144 pmw and FAMILY 212 pmw, which is more often than WOMAN, MASCULINE and FEMININE in the journal. Figure 55 below displays the relationship between the words and their rates across time. The are peaks in use for FAMILY in 2008 and 2010, and there is some relationship to increased rates in CHILDREN and FAMILY together in the years 2002, 2004 and 2010. The results for both keywords are also characterised by a series of peaks and troughs, with an overall declining trend across time, although this occurs at a greater rate for CHILDREN.

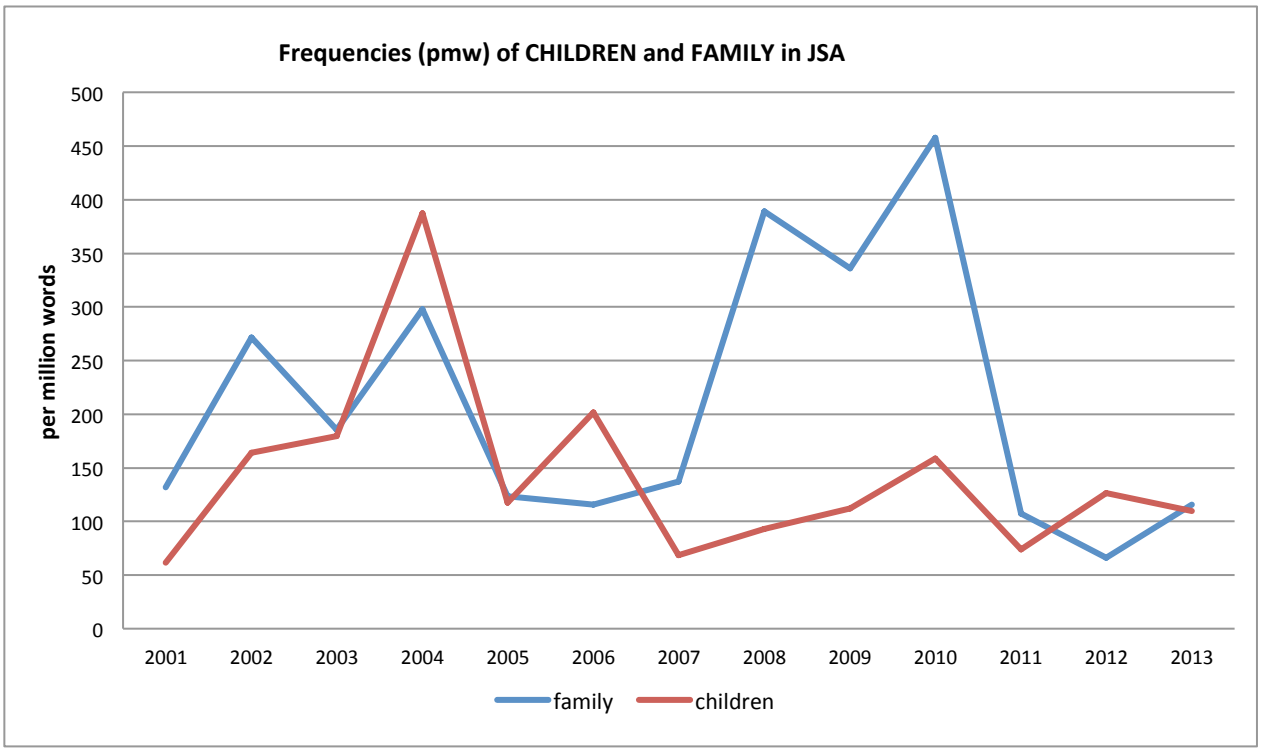

Figure 55: The frequencies (per million words) of CHILDREN and FAMILY in the *Journal of Social Archaeology*

The collocation data is given in Tables 72 and 73 to provide some information in terms of the context of use of either keyword.

Table 72: Top five collocations of CHILDREN in JSA according to MI-score and frequency, by year

CHILDREN	1	2	3	4	5
2001	women(3)	-	-	-	-
2002	women(6)	men (5)	worked(4)	around(3)	house(3)
2003	Aboriginal(4)	parents (3)	house(3)	-	-
2004	women(13)	two(6)	infants(6)	adults(6)	white(5)
2005	families(4)	aboriginal(4)	women(3)	-	-
2006	Aataentsic (11)	other (4)	women(3)	time(3)	history(3)
2008	women (6)	men(3)	-	-	-
2009	women (5)	tombs(5)	not(3)	men(3)	found(3)
2010	women(5)	not(13)	men(3)	-	-
2012	interred(4)	-	-	-	-

The word CHILDREN occurs most frequently with WOMEN, and thus is seen as one syntactic unit which has the same semantic role in the text. Interestingly, CHILDREN also occurs with '*men'* and refers to a family group, such as '*men, women and children*', also denoting use as one syntactic unit. The highest MI score for CHILDREN was with *adults* (15.02). The emergent categories are primarily with relationship and kinship terms (*women, men, infants, adults, parents, families*), and also 'identification' (*Aboriginal, Aataentsic, two, not, white*). There is also some significance with the words *house* and *tomb.*

Table 73: Top five collocations of FAMILY in JSA according to MI-score and frequency, by year

FAMILY	1	2	3	4	5
2001	work(3)	-	-	-	-
2002	name (8)	common(5)	members(4)	life(4)	extended(4)
2003	parish (7)	extended(6)	members(3)	comprising(3)	-
2004	white (5)	members(5)	home(5)	unit(4)	one(4)
2005	community (3)	-	-	-	-
2007	members (4)	farm(3)	-	-	-
2008	members (8)	deceased(8)	history(6)	graves(6)	per cent(4)
2009	house (27)	architecture(22)	extended(7)	traditional(5)	single(4)
2010	death (19)	members(9)	social(6)	history(6)	figure(6)
2013	language(3)	-	-	-	-

The results are minimal, making them difficult to categorise, but the main group that can be formed concerns **'**Composition/type' (*members, extended, traditional, single,*

unit and *one*). There is some content around 'Property/status' (*home, architecture, farm, parish, name, white, common*). The highest MI score occurred with the words *extended* (15.02) and *nuclear* (14.52). Overall, there are no significant changes over time in how FAMILY or CHILDREN are described or interrogated in the JSA.

7.8 Results for *Archaeologies*

Archaeologies (ARCH) was included in the corpus as it is a recently established journal, with a more unconventional, inclusive approach to scholarship, focussing on issues of bias, sexism, feminism and gender related topics. Given this background, the hypothesis is that most keywords should have high frequencies, and would be used within contexts of current gender theories (e.g. MAN not denoting HUMAN and not meaning biological SEX). As the newest journal, the corpus is the smallest of the six used in this study:221 articles and 1,424,318 words over eight years.

7.8.1 The use of GENDER in ARCH

Looking at the results for GENDER in ARCH in Figure 56, there are two clear peaks: one in 2005 and another in 2011. These can be attributed to the publication in the first issue of Conkey's 'Dwelling at the margins, action at the intersection? Feminist and Indigenous archaeologies, 2005', and the series of responses to this paper. The 2011 (1) volume was a special issue on the impact of feminist theories on archaeology. As such, the peaks are reflections of greater than average focus on gender theory rather than the 'average' or perhaps 'real' guide to the content of gender in ARCH. The average across the corpus is 417 pmw, but excluding the 2011 peak the results are surprisingly quite low, with most issues having fewer than 100 pmw (for example 2008 (3) = 47.4 pmw and 2013 (3) = 70.5 pmw). The overall trend is a decline over time, as shown in the trend line in Figure 56. The data in this graph has been shown by volume, given that the corpus is only eight years old, and in this format particular articles or special issues can be isolated. Taking the results for GENDER in ARCH in light of the results of the other journals, it is apparent that use of this keyword has not been an exponentially increasing phenomenon, but one that comes in and out of focus, and that has, in fact, declined since 2010.

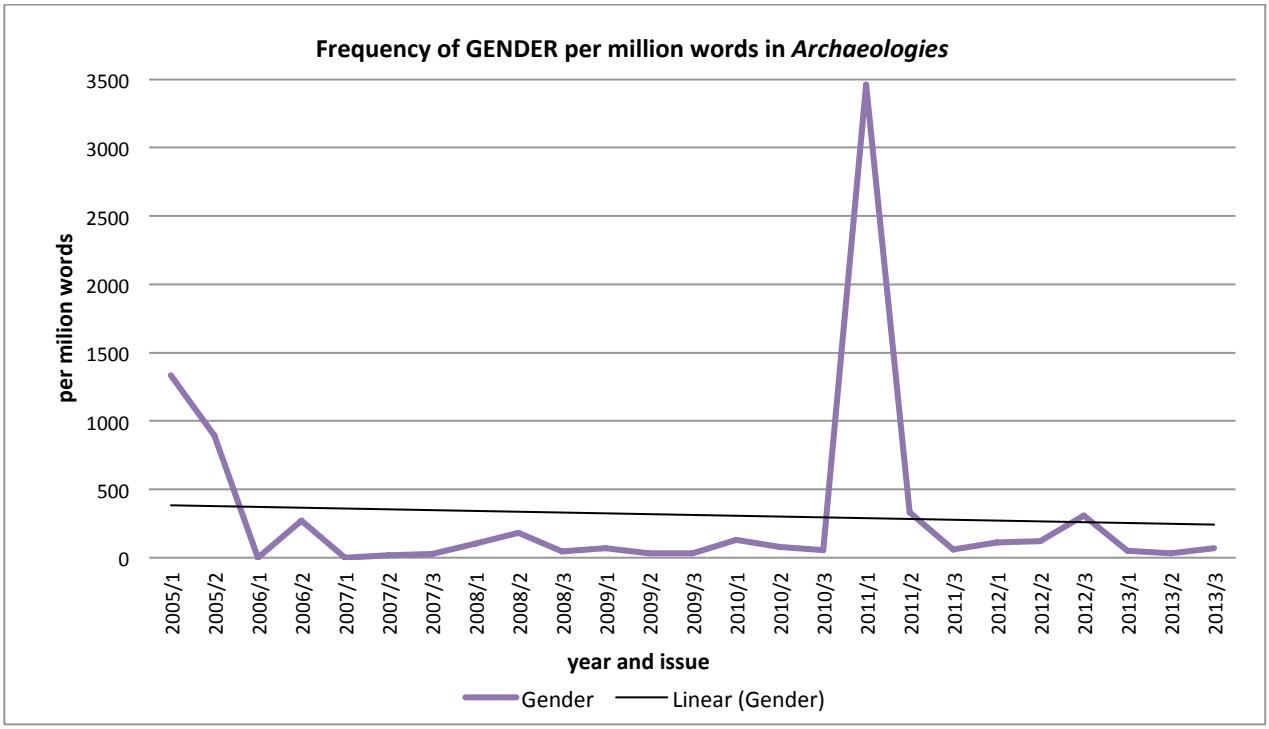

Figure 56: The frequency (per million words) of GENDER in *Archaeologies* with trend line

There are few collocations for GENDER in ARCH due to the size of the corpus, as shown in Table 74. Nevertheless, these data show that the context of use is in terms of '*gender archaeology*', a subject that intersects with class, ethnicity and race, and with a focus on women.

Table 74: Top five collocations of GENDER in ARCH according to MI-score and frequency, by year

GENDER	1	2	3	4	5
2005	studies(8)	their(7)	archaeology(7)	women(6)	relations(6)
2006	equality (4)	-	-	-	-
2008	social (3)	relations (3)	ethnicity(3)	-	-
2009	women(3)	race(3)	class(3)	-	-
2010	roles(3)	place(3)	class(3)	archaeology(3)	-
2011	archaeology(83)	power(41)	class(27)	sexuality(24)	theory(23)
2012	archaeology (7)	relations(4)	class(3)	ecological(3)	agency(3)

From the collocation data, it can be seen that the keywords MASCULINE and FEMININE did not appear with GENDER. In examining the actual counts of the two keywords in ARCH (Figure 57), in most years the scores flat lined, with no appearances in the years 2006, 2007, 2008, 2009 and 2012 for FEMININE, and null scores in 2006, 2007, 2008,

2009, 2012 and 2013 for MASCULINE. Both have a slight increase in 2011, with MASCULINE appearing 27 times and FEMININE 12 times; in both these are instances these are the highest counts for these keywords. Overall, MASCULINE occurs at a higher normed rate of 26 pmw to FEMININE (14 pmw). In addition, no collocations for either word met the minimum criteria for significance due to their low frequency of occurrence in the corpus.

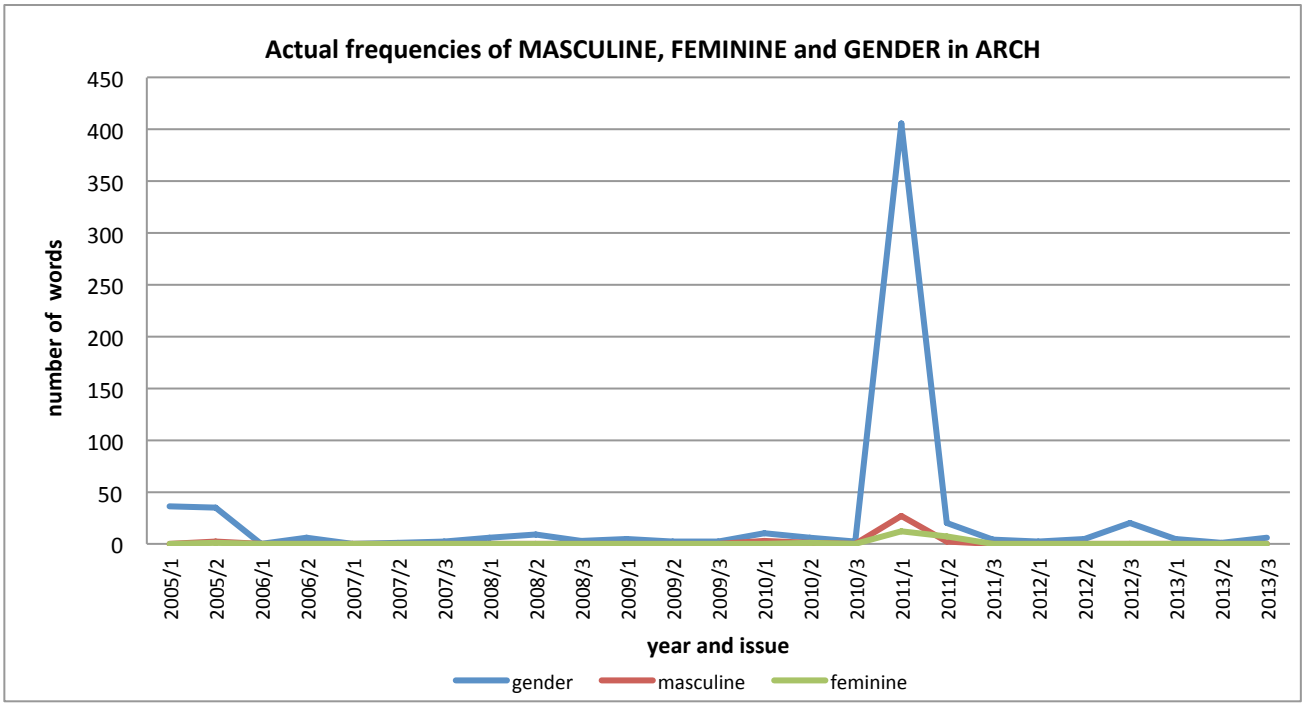

Figure 57: The actual frequencies (number of words) of GENDER, MASCULINE and FEMININE in *Archaeologies*

7.8.2 The use of GENDER, SEX, FEMALE and MALE in ARCH

Results of the keyword frequencies in ARCH in Figure 58 show a link between GENDER, SEX, MALE and FEMALE in 2011, when all results increase. The use of MALE, however, is twice the rate of FEMALE, at 128 pmw compared to 82 pmw. Both words occur together as a pair, but MALE is used at an increased rate in 2005 and 2011. SEX has a rate of 73 pmw and shows a slight increase over time. From the graph, the relationship between SEX and GENDER is negligible, apart from 2011 which on the whole is an exception in the data.

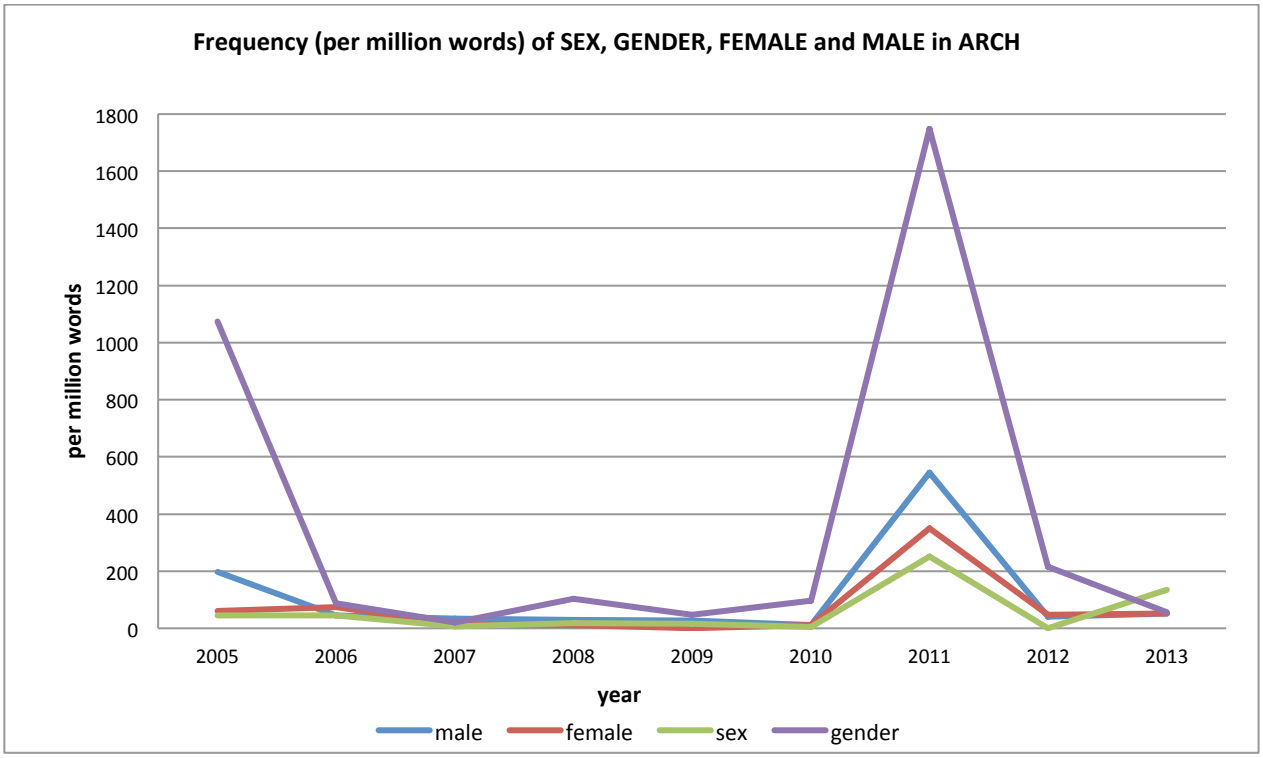

Figure 58: The frequencies (per million words) of GENDER, MALE, SEX and FEMALE in *Archaeologies*

In Figure 58 it is apparent that the relationship between SEX, MALE and FEMALE is indistinct, as the actual count data is low, with many null values for all three words in some years while in others they appear fewer than five times. The collocations are subsequently minimal but do show that MALE and FEMALE are used as a binomial pair, and as one unit. They are:

SEX: **2006** *same (3)*

2011 *gender (11), roles (6), women (5), sexuality (5), new (5)*

2013 *tourism (11), their (5), life (3)*

Highest MI Score with *role* (17.04)

MALE: 2005 *working (3), female (3), dominated (3)*

2011 *female (20), women (13), roles (7), burials(7), activities(7)*

2013 *female (3)*

Highest MI Score with *roles* (17.04)

FEMALE: 2005 *male (3)*

2011 *male (20), leaders (5), burials (5), associated (5), roles(4)*

2013 *western (3), tourists (3), male (3)*

Highest MI Score with *male* (16.47)

Figure 59 is a word cloud made up of the entire set of collocation results for FEMALE in the ARCH corpus (Appendix 6) to provide a greater indication of content in addition to those meeting the criteria for significance.

Figure 59: Word cloud from collocations of FEMALE in ARCH

7.8.3 The use of WOMEN, MEN, MAN and WOMAN in ARCH

A comparison of the keyword data shows that WOMEN has a score of 817 pmw, which is the highest result for this word in the corpus. This is twice the rate of most other journals, and nearly twice the rate of the word MEN, which occurs at an average of 429 pmw. Additionally, the results for WOMAN (128 pmw) are also the highest for this word in the corpus, even though it is used half as often as MAN (225 pmw). These results, however, are not simply able to be translated into an increased content about women or a woman, because, as is shown in Figure 60, the high rates are attributed to just two issues:2005 and 2011. When these years are excluded WOMEN and WOMAN are used at similar rates to other journals. When looking at each word pair it is also apparent that MEN is used more than WOMEN in 2006, 2009, 2010 and 2013, and increases in use over time.

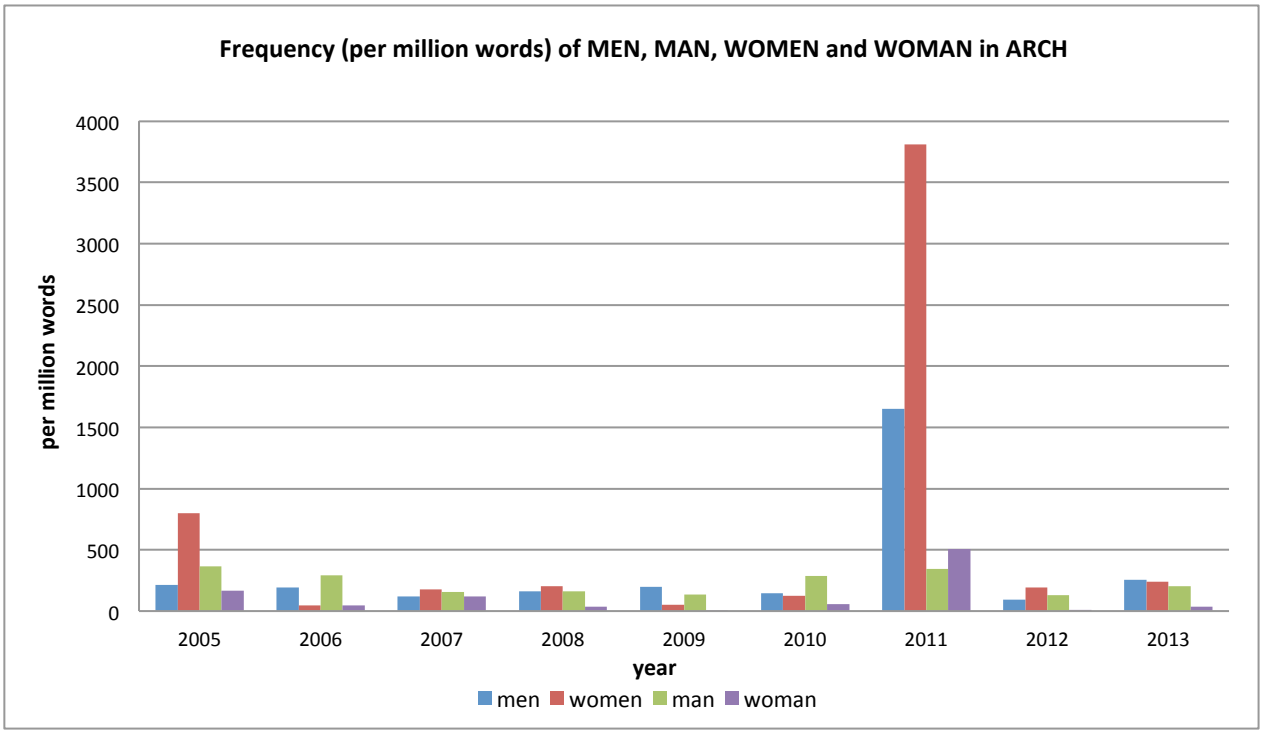

Figure 60: The frequency (per million words) of WOMEN, MEN, MAN and WOMAN in *Archaeologies*

MAN occurs more than WOMAN in all years but 2011, and the rate of WOMAN stays at a constant rate across time. Oddly, WOMAN scores a very similar number of words as MALE over time. Figure 61 shows some divergence in 2007 and 2010, but, considering the total number of words in each year, there is some congruency. The words both refer to a singular person, so may account for the similar frequencies, but are not grammatically used as one syntactic unit, and are not collocated words as shown in Table 75 below for WOMAN.

Table 75: Top five collocations of WOMAN in ARCH according to MI-score and frequency, by year

WOMAN	1	2	3	4	5
2007	figure(5)	man(5)	Spanish (3)	-	-
2010	young(3)	-	-	-	-
2011	native (15)	American (10)	Indian(8)	identity(6)	double(5)

These results, though minimal, show that WOMAN is most often used to refer to a single female identified in an image or iconography and usually identified by race or ethnicity. The highest MI score was with *double* (15.2) and most often with *native*.

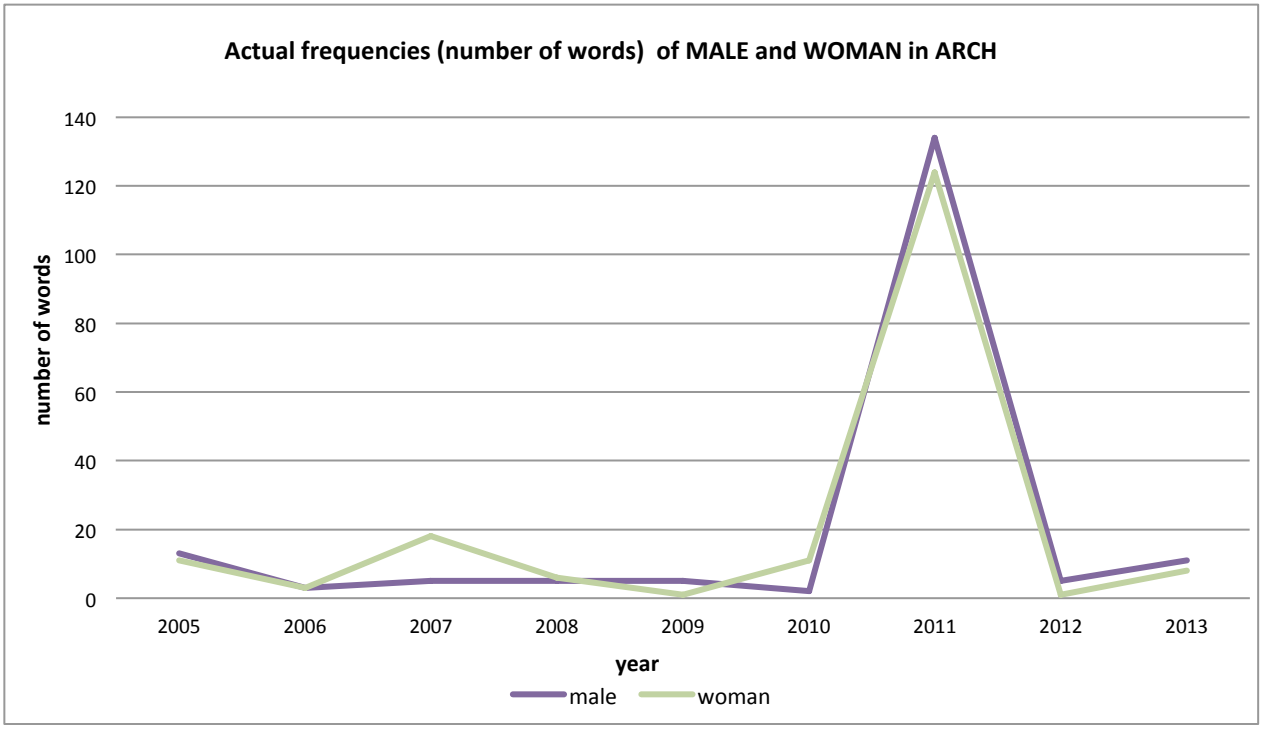

Figure 61: The actual frequencies (number of words) of MALE and WOMAN in ARCH

A similar trend occurs with MEN and GENDER in ARCH, where the frequency data of the two keywords is similar (Figure 62). In many years they are used at the same rate and in 2005, 2009 and 2013 there is an inverse relationship. The association between the words is clear —men have gender—and so logically occur together, but this trend is unique to ARCH.

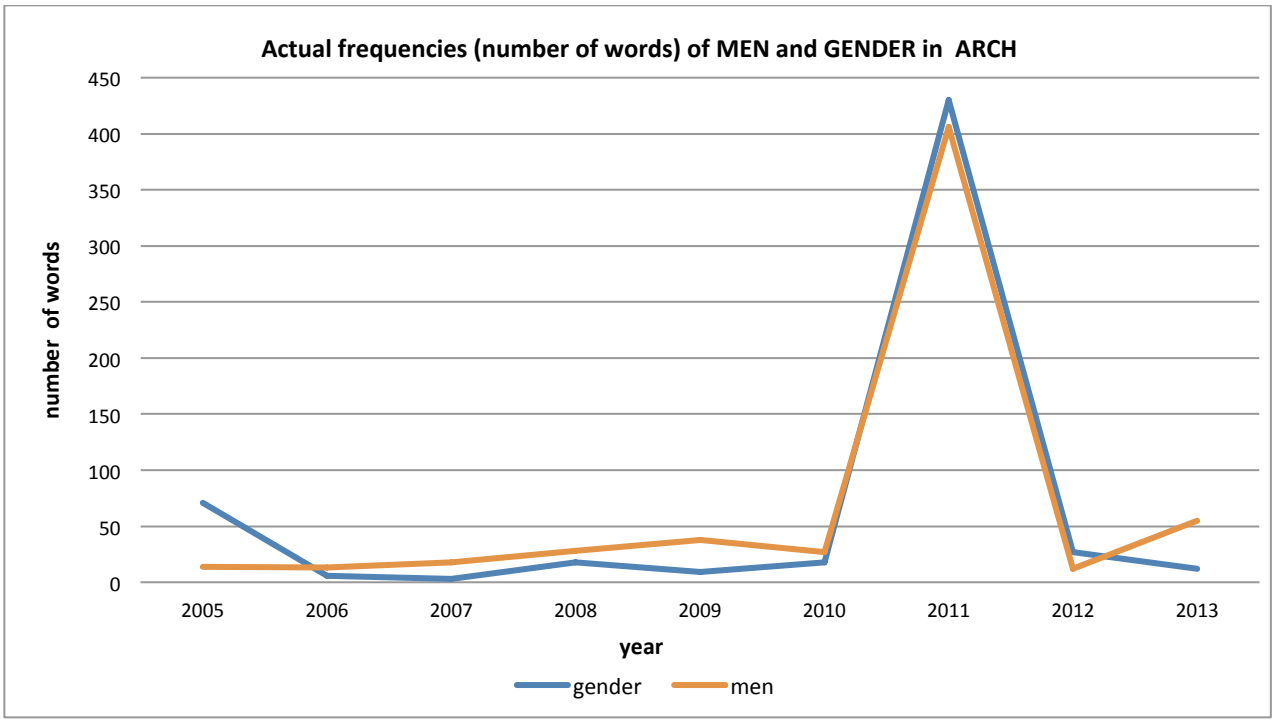

Figure 62: The actual frequencies (number of words) of MEN and GENDER in *Archaeologies*

An examination of collocation results for MEN shows that the highest MI score for MEN was with *women* (17.95), as well as raw frequency, thus it is used typically in the syntagmatic relation of conjunction, e.g. *men and women.* In this sense, the two words have the same semantic role in the text. Like WOMAN, there is a semantic category that occurs in relation to a range of racial or ethnic identifiers. This type of categorisation may be reflective of the nature of the journal, as per the values of WAC and so ethnicity is continually drawn upon as a source of identifying people through different types of discourse, as well as Conkey's 2005 paper which links gender and Indigenous archaeologies.

Table 76: Top five collocations of MEN in ARCH according to MI-score and frequency, by year

MEN	1	2	3	4	5
2005	women (5)	-	-	-	-
2008	women (5)	children (4)	workers (3)	Caribbean (3)	labor(3)
2009	women (7)	work (6)	minds(3)	-	-
2010	women (5)	rational(3)	great(3)	areas (3)	-
2011	women(113)	native(36)	European (24)	American (21)	prehistoric(18)
2012	two (3)	single(3)	senior(3)	-	-
2013	young (12)	Egyptian(12)	women(8)	relationships(5)	younger (4)

Gender does not appear in Table 76, but concordance lines are given for MEN and GENDER below which show that there is some discussion explicitly on men and gender in a 2011 paper. Overall, most content around GENDER has no direct collocational relationship to MEN, but MEN are discussed in terms of androcentrism, feminist standpoint theory and critiques of men's bias under the umbrella term 'gender archaeology'.

Table 77: Sample of concordance lines for MEN and GENDER in ARCH

2005		
not overtly feminist but discuss gender or	**men**	and women and are thus susceptible
students related the site to three groups:	**men**	women (gender), and children
2011		
knowledge that includes both women and	**men**	and gender power dynamics.
power dynamics among reform women and	**men.**	
marked by gender associated with age. Old	**men**	are not given the same
there is a need to study prehistoric	**men**	as gendered and I will argue
will argue that to include studies in	**men**	and masculinity into a gender

The collocation results for WOMEN show racialisation of pre-modifying nouns, as is the case with many of the keywords. The 'discipline' category reoccurred and, like GENDER, was used to denote a theme or sub-disciplinary topic. Broadly across ARCH, GENDER is

used to denote WOMEN and not MEN. The adjectives describing WOMEN are generally related to status and bias in the archaeological discipline, and also to the 'pair' word MEN. MEN occurred to the left of women approximately 65% of the time, which shows some deliberate change to putting women first, i.e. as 'women and men'. The phrase 'men, women and children' was frequent in the concordance lines (Appendix 6). The highest MI Score was, however, with the word *domestic* (19.37). WOMEN occurs at a far higher rate than that of WOMAN in ARCH, with WOMEN at an average rate of 817 pmw and WOMAN at 128 pmw. The collocation data for WOMEN is shown in Table 78 below.

Table 78: Top five collocations of WOMEN in ARCH according to MI-score and frequency, by year

WOMEN	1	2	3	4	5
2005	archaeology (11)	prehistory (9)	gender (6)	engendering(6)	men(5)
2007	young (5)	men (4)	their (3)	Indian (3)	communities(3)
2008	men (5)	children (4)	workers (3)	Caribbean (3)	labor(3)
2009	men (7)	gender (3)	-	-	-
2010	men (5)	pictures(4)	areas(3)	young (3)	two(3)
2011	men(113)	native(104)	American(59)	European (39)	history(36)
2012	England (5)	role(4)	new (4)	-	-
2013	western (15)	involved(12)	men(8)	foreign(7)	relationships (4)

The keyword MAN was not expected to be used for the generic HUMAN in ARCH, though the collocations in Table 79 initially appear to indicate the reverse, with words such as *primitive, hunter* and *prehistoric*. On inspection of the concordance lines, it is apparent the use of these words together is in the context of criticism of the 'man the hunter' model and the stereotypical views on men and women's roles in the past.

Table 79: Top five collocations of MAN in ARCH according to MI-score and frequency, by year

MAN	1	2	3	4	5
2005	primitive (6)	prehistoric (3)	Neanderthal (3)	children(3)	-
2006	output (5)	-	-	-	-
2007	woman(5)	museum(5)	Spanish(4)	one(3)	-
2008	history (3)	last (3)	-	-	-
2009	men (7)	gender (3)	-	-	-
2010	young (9)	plan(4)	-	-	-
2011	hunter(7)	woman(5)	white(5)	one(5)	myth(5)
2013	common(12)	works(3)	nationalist(3)	colonialist(3)	alternative (3)

7.8.4 The use of HUMAN and PEOPLE in ARCH

PEOPLE is the keyword used most in the corpus and its normed rate of 1432 pmw is also the highest score of all results in ARCH. HUMAN is used at 707 pmw, which is higher than most of the other keywords, but lower than WOMEN. This is reflective of the journal's focus on archaeology in the present, where there is more content on subjects in the past and more on themes such as human rights and social justice. Figure 63 shows that there is a rapid decline in the use of PEOPLE in 2009, despite a peak of 2993 pmw in 2006. In 2009 the rates for HUMAN and PEOPLE converge and after this point, and where there is a decreasing rate for PEOPLE, HUMAN stays at a constant rate. These trends (although over a short timeframe) may indicate that there is a change in the journal's focus in more recent years.

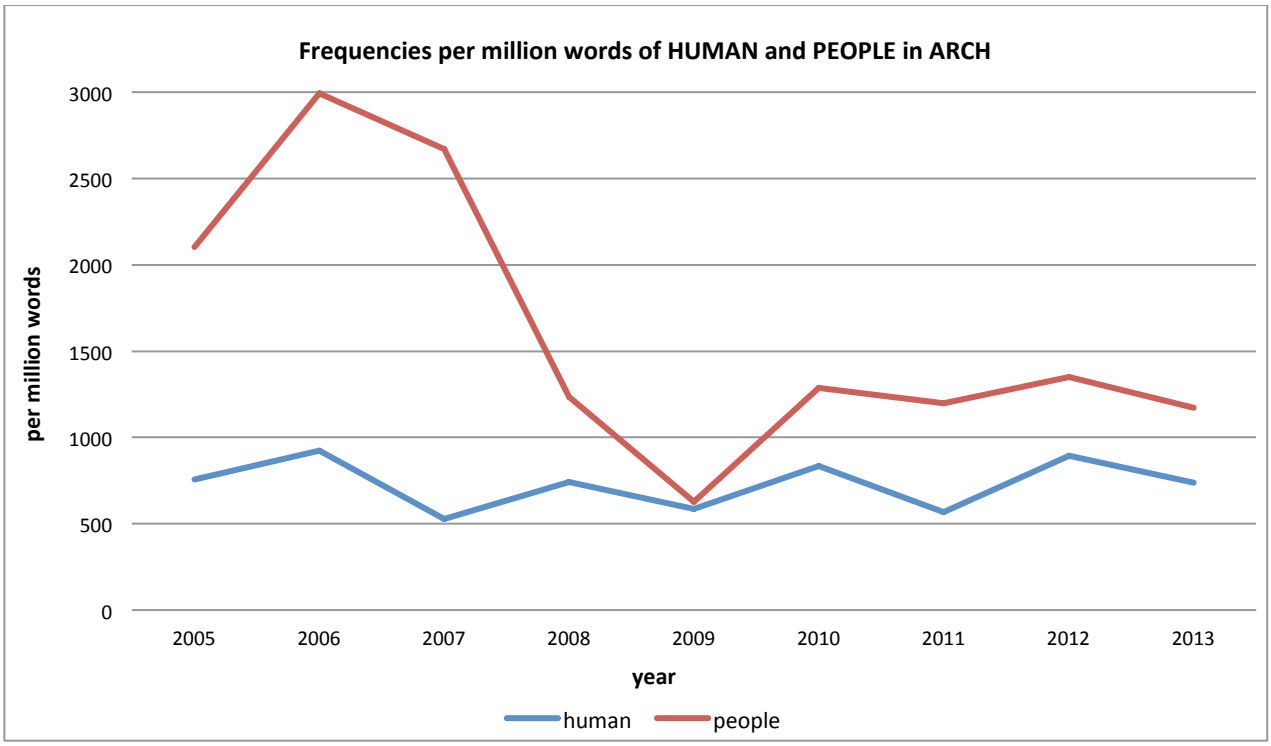

Figure 63: The frequencies (per million words) of HUMAN and PEOPLE in *Archaeologies*

The collocations for HUMAN are given in Table 80 below. The highest MI score was with the word *behavior* (13.52). The words *rights* and *remains* occur at a consistently high rate. Overall, there is little connection to gender and its related topics.

Table 80: Top five collocations of HUMAN in ARCH according to MI-score and frequency, by year

HUMAN	1	2	3	4	5
2005	rights (13)	remains (5)	social (3)	issues(3)	experience(3)
2006	remains (24)	rights (16)	repatriation(9)	dignity(8)	goods(6)
2007	rights (19)	remains (14)	beings(6)	education(4)	organisation(4)
2008	rights (54)	remains (14)	watch(12)	beings(9)	international(7)
2009	geography (8)	archaeology (8)	university(7)	material(7)	rights(6)
2010	scale(20)	geography(19)	rights(10)	archaeology(10)	subjects(8)
2011	rights(14)	beings(12)	diversity(7)	evolution(7)	science(6)
2012	remains (12)	rights (8)	scale(7)	behaviour(7)	objects(6)
2013	rights(77)	investigations(25)	remains(12)	abuses(9)	international (8)

In terms of PEOPLE, the collocation data in Table 81 show clear differences when compared to HUMAN. PEOPLE is frequently used in the context of *living, local* and *past,* and most often with *indigenous*. The highest MI score was with *enslaved* (10.94). There is no connection to gendered words or any significant relationships to any of the keywords.

Table 81: Top five collocations of PEOPLE in ARCH according to MI-score and frequency, by year

PEOPLE	1	2	3	4	5
2005	Maya (15)	indigenous (6)	groups (6)	local(6)	past(6)
2006	indigenous (42)	Maya (16)	history(12)	past(10)	many(10)
2007	local (50)	Maya (29)	indigenous (28)	old(15)	Indian(12)
2008	history(13)	thousands(8)	past(8)	enslaved(7)	local(7)
2009	things (8)	many (8)	past(8)	material(7)	living(4)
2010	local(34)	archaeology(13)	work(9)	same(8)	living(8)
2011	Indigenous(13)	some(10)	living(10)	groups(9)	archaeology(9)
2012	native (20)	local(13)	some(8)	many(8)	past(6)
2013	local(20)	affected(18)	river(17)	Jewish(12)	indigenous (11)

7.8.5 The use of CHILDREN and FAMILY in ARCH

CHILDREN and FAMILY both occur less often in ARCH than other journals in the corpus. CHILDREN is used on average 183 pmw, and FAMILY 233 pmw. Figure 65 displays the relationship between the words and their rates across time. The peak rate for

CHILDREN—831 pmw in 2005—is twice the rate of the next highest score of 410 pmw in 2011, and well above the average frequency rate. These two peaks account for most of the data for CHILDREN. There is some relationship to increased rates in CHILDREN and FAMILY together in 2011, and there are similar rates for both in 2006 and 2007. The results for FAMILY are characterised by one peak in 2011. Overall, FAMILY shows an increasing trend across time, whereas CHILDREN decreases.

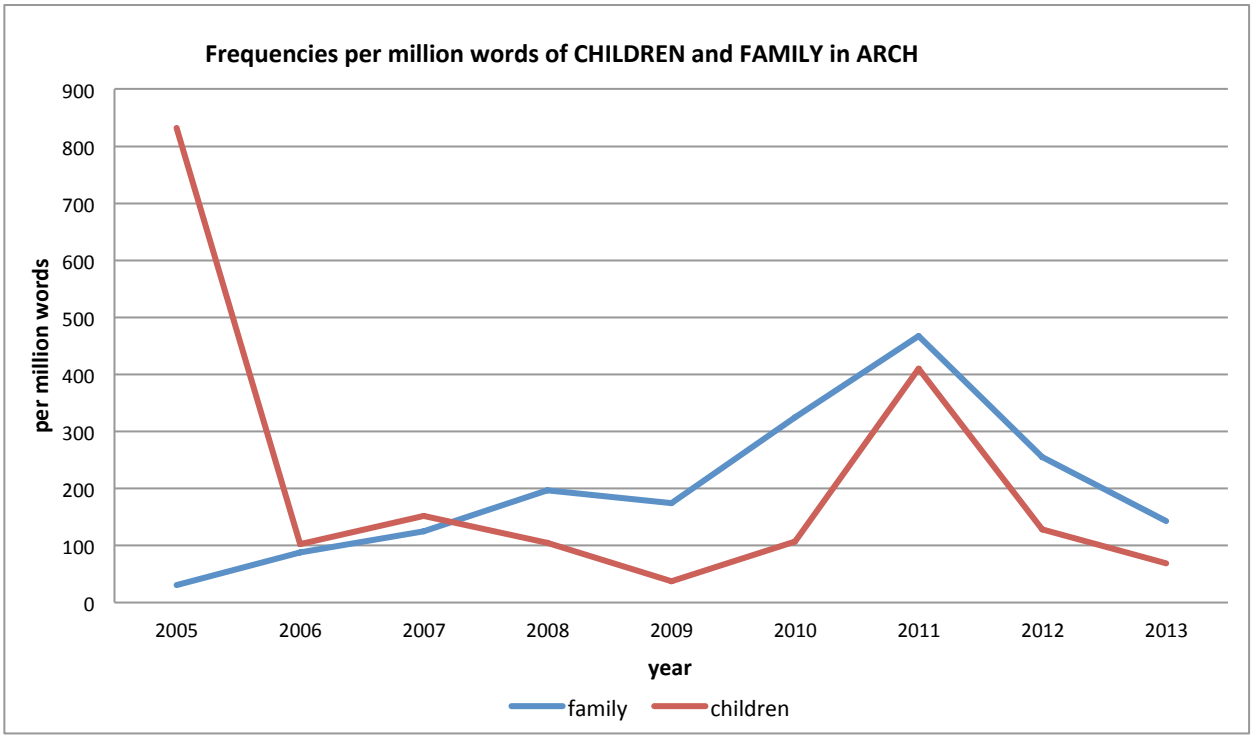

Figure 65: The frequencies (per million words) of CHILDREN and FAMILY in *Archaeologies*

The collocations for CHILDREN and FAMILY are given in Tables 82 and 83.

Table 82: Top five collocations of CHILDREN in ARCH according to MI-score and frequency, by year

CHILDREN	1	2	3	4	5
2005	archaeology (6)	work (5)	group (4)	public(4)	see(4)
2006	shrine (3)	-	-	-	-
2007	school (4)	Mayan (4)	local(4)	figure(4)	site(4)
2008	women(4)	-	-	-	-
2011	women(14)	archaeology(8)	miss(6)	sex(4)	men(4)
2012	memory (3)	ghetto(3)	-	-	-
2013	local(20)	affected(18)	river(17)	Jewish(12)	indigenous (11)

In examining the collocation data the word CHILDREN occurs with WOMEN, and also has the highest MI score (15.47), thus, again, they are seen as one syntactic unit (a noun phrase) and have the same semantic role in the text. The number of significant results is small but concern 'identification' (*Mayan, indigenous, Jewish, local, school*), with only minor occurrences indicating performance through verbs or adjectives. Overall, the concordance lines for CHILDREN (Appendix 6) indicate they are most often seen as an extension of, or as dependents on, women and/or the extended kinship group.

Table 83 reveals trends over time for FAMILY. The collocations are diverse but generally FAMILY is conceived as part of external social structures: *community, members, friends, place, outside*, as well as internal kinship structures: *members, father, mother, extended, generation, ties, life, history*. The highest MI score occurred with the word *mother* (15.47).

Table 83: Top five collocations of FAMILY in ARCH according to MI-score and frequency, by year

FAMILY	1	2	3	4	5
2007	work (3)	-	-	-	-
2008	members(6)	work (3)	living (3)	community (3)	-
2009	members(5)	work(4)	terrace (3)	place(3)	-
2010	outside(6)	father(6)	lived(5)	mother(4)	history(4)
2011	women(7)	members(6)	community (5)	support (4)	life (4)
2012	friends (6)	history(5)	ties(4)	memorial(3)	extended(3)
2013	extended(4)	generation(3)	four(3)	-	-

7.9 Results for the *Journal of Archaeological Method and Theory*

The *Journal of Archaeological Method and Theory's* (JAMT) inaugural issue was published in 1994, but followed in the footsteps of *Advances in Archaeological Method and Theory*, which ran from 1978 to 1987, and also had the same editor-in-chief. As the title suggests, its content is on 'method or theory' focused issues. Specific themes include the history of archaeology, construction theory, soil chemistry any works 'that do not fit comfortably into established article genres' (Schiffer 1994:2). It is based in the United States, but the journal has an international advisory board and content is targeted towards an international audience. Its themes make it a suitable forum for

articles on gender theories and histories. The JAMT corpus contains 273 articles, from 1994 to 2013 and is 3,521,726 words.

7.9.1 The use of GENDER in JAMT

There are three mains peaks in use for GENDER in the JAMT; the first in 1998 was 1603 pmw, followed by a smaller peak in 2001 of 572 pmw. In 2007 content reached a high of 1894 pmw. The average use in the corpus is 357 pmw and declines over time. Figure 66 shows this rate dropped down to 42 pmw in 2011, and 34 pmw in 2013, which are lower rates than most journals in the corpus, and there is a considerable dip after 2007.

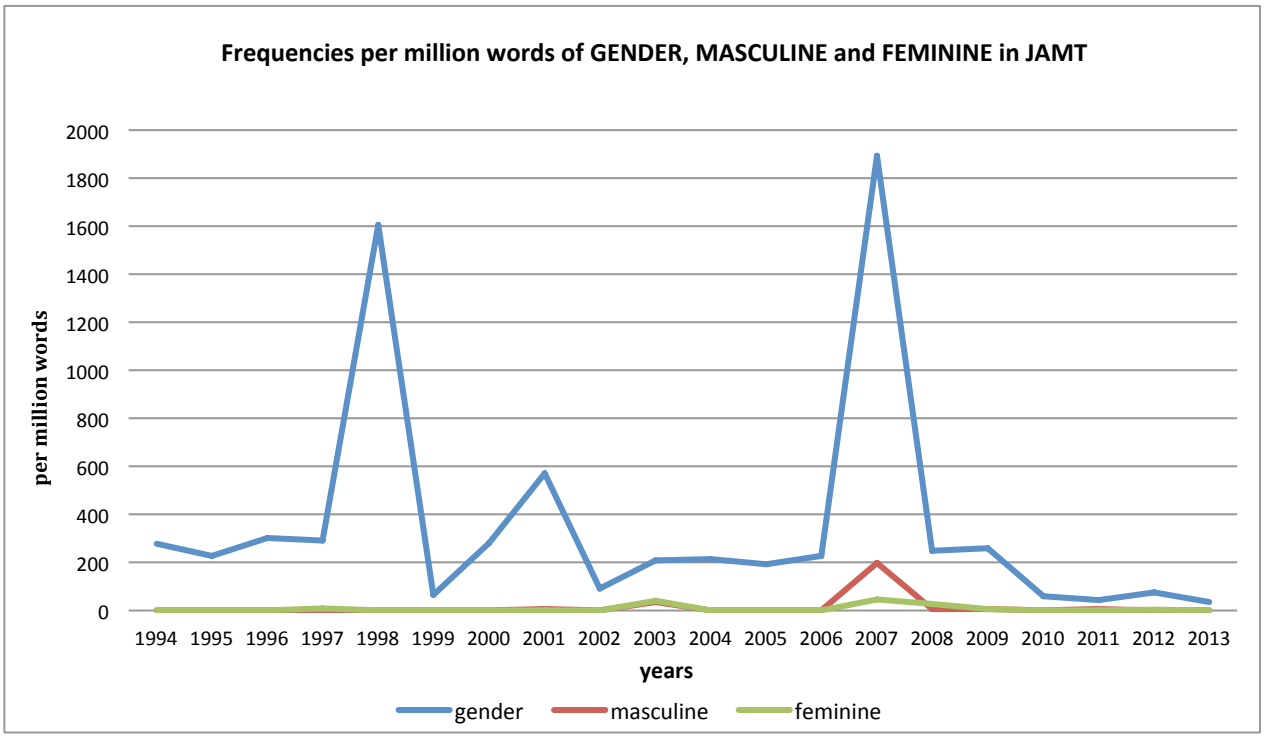

Figure 66: The frequencies (pmw) of GENDER, MASCULINE and FEMININE in *Journal of Archaeological Method and Theory*

The results of the collocations for GENDER were sorted by MI score and frequency rate (Table 84).

Table 84: Top five collocations of GENDER in JAMT, according to MI-score and frequency by year

GENDER	1	2	3	4	5
1994	archaeology(9)	class(6)	research(4)	new(4)	-
1995	position(27)	social(25)	age(18)	horizontal(11)	identity(9)
1996	theory(5)	feminist(4)	class(4)	based(4)	inequality(3)
1997	age (9)	status(5)	relations (5)	class (5)	ethnic(3)
1998	archaeology (42)	relations(28)	questions (20)	sex (19)	scale(14)
2000	class (6)	social (5)	status (4)	potters(4)	archaeology(4)
2001	categories (16)	age(16)	archaeology (13)	roles(6)	cultural (6)
2003	class(23)	labor(5)	race (4)	progressive (4)	archaeologies (4)
2004	power(8)	sex(5)	class(4)	archaeology(4)	study (3)
2005	leadership(5)	age(5)	studies(4)	sexuality (4)	-
2006	author (8)	archaeology(6)	citing (3)	-	-
2007	archaeology (141)	feminist(51)	feminism (32)	theory (31)	archaeological (28)
2008	archaeology (17)	childhood (18)	invisible(12)	European (12)	writing(12)
2009	sex (11)	ritual(3)	representations(3)	power (3)	female (3)
2012	age (6)	-	-	-	-

The highest MI score for GENDER was with the word *feminism* (16.1). The most frequently occurring collocation of GENDER is *archaeology,* which occur together 240 times. This, in combination with other collocated words such as *research, theory, feminist, questions, power, leadership, study, writing,* and *author,* denote considerable discussion on 'gender archaeology' and its associated theories. As shown in Table 84, the words *class, race, age* and *status* also occur as regular collocations. This combination of words reflects use of the 'great triplet' of gender, class and race. These two themes reflect the theoretical focus of the journal, and a concern with intersectionality and identity.

GENDER, FEMININE and MASCULINE were analysed in relation to one another to find out if the three words occur together over time. Figure 66 demonstrates that from 1994 to 2001 FEMININE and MASCULINE had null scores, with the peaks and troughs of GENDER simultaneously occurring in these years. This clearly demonstrates that there is no corresponding relationship in these years. In 2007, the high for GENDER, there is also an increase in MASCULINE to 197 pmw (or 39 words) and FEMININE of 45 pmw (nine

words), indicating some discussion under the theme of gender. In 2003 FEMININE and MASCULINE both occur once at 40 pmw, and are used together. Across the JAMT corpus, MASCULINE occurs at a rate of around 20 pmw and FEMININE around 6 pmw. There were no collocations that met the criteria for significance for either MASCULINE or FEMININE. The higher rate of MASCULINE can be attributed to the 2007 paper by Moser 'On disciplinary culture: archaeology as fieldwork and Its gendered associations', which critiques stereotypical masculine behaviour in the field.

In terms of GENDER and SEX, SEX occurred as a significant collocation of GENDER in three years, with the word sexuality also appearing with GENDER. Figure 67 shows that SEX is used at a much lower rate, but consistently, and on average around 67 pmw. The two words converge in rates in 1999 and from 2010 to 2013 (as they are both used very minimally). In 2002 SEX is used more often than GENDER, and can be pinpointed to Pike-Tay and Cosgrove's 2002 'From reindeer to wallaby: recovering patterns of seasonality, mobility, and prey selection in the Palaeolithic Old World' which focuses on sex in terms of skeletochronological analyses.

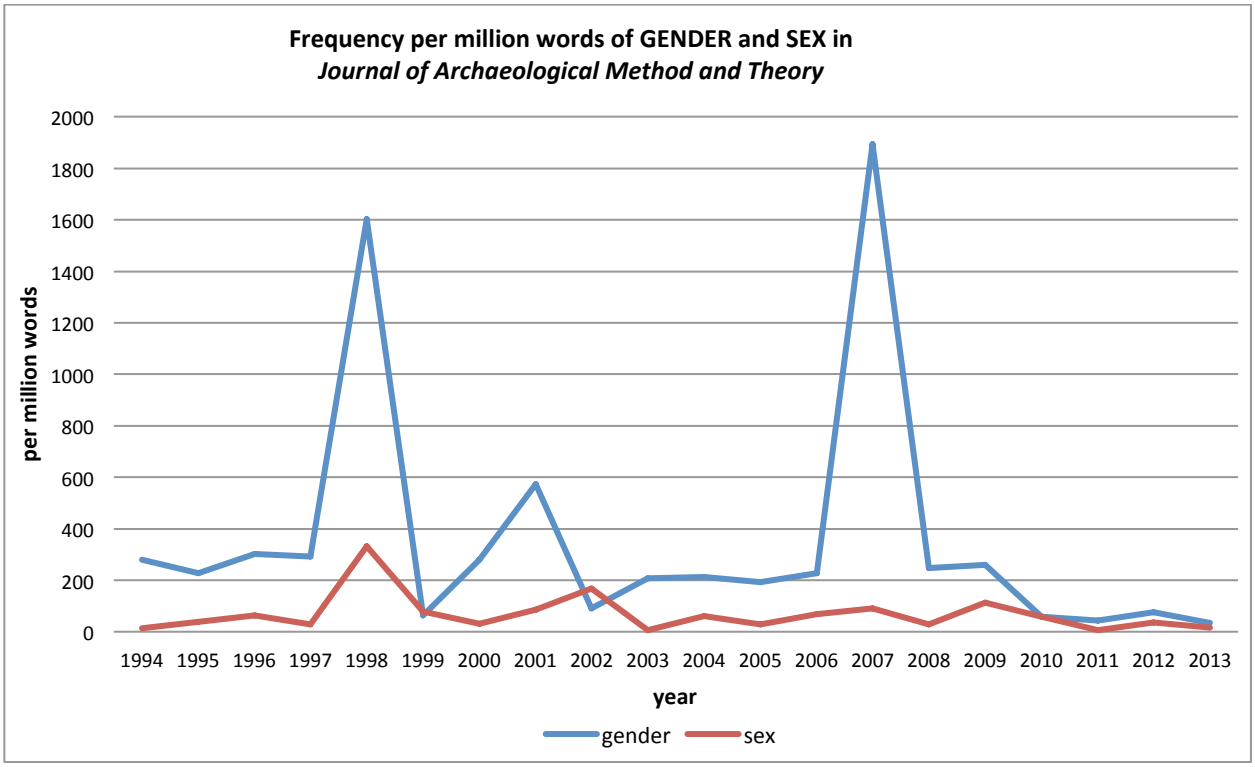

Figure 67: The frequencies (pmw) of GENDER and SEX in *Journal of Archaeological Method and Theory*

The collocations for SEX are given in Table 85. They show that the word GENDER occurs as the most frequent collocation, and the highest MI score is with *determination* (16.3).

Table 85: Top five collocations of SEX in JAMT, according to MI-score and frequency by year

SEX	1	2	3	4	5
1995	age(4)	social(3)	determination(3)	-	-
1996	age(3)	-	-	-	-
1998	gender (19)	biological(9)	class(6)	age (5)	bias(4)
2002	age (16)	stage(8)	season (5)	tooth(4)	ratios (3)
2007	gender (9)	about(4)	difference (3)	-	-
2009	gender (11)	-	-	-	-

To explore more of how the words SEX and GENDER occur together, concordances were examined. In context, the words are used to describe the differences between the terms and explain the theory behind social gender, as seen in the examples in Table 86. There is a trend in more recent years, however, to use the terms as one semantic unit—i.e. linking 'sex and gender' in the same way that 'men and women' or 'tables and chairs' are grouped in English. This is a change from the earliest years of the journal when sex was frequently used together with age.

Table 86: Sample of concordance lines for SEX in JAMT with a focus on collocated GENDER

1994		
correlated with differences in	**sex,**	age at death, paleopathology, grave goods
1998		
this paper I use the word	**sex**	rather than gender, for the following
individual chooses to manifest that defined	**sex**	usually referred to as gender
terms such as 'theory, '' 'gender,' and	**sex**	have been used inconsistently; I suggest
This reworking of the concepts of	**sex**	and gender supports the view that
2007		
women and those marginalized by conventional	**sex**	/gender structures. As articulated by
authors have chapters on gender, feminism or	**sex**	and most of these are in special
is authorial on a subject of the	**sex**	/gender of artifact manufacture (and
2009		
have typically approached subjectivity through	**sex**	and gender, sex/gender is not necessarily
breasts as a symbolic repository of male	**sex**	gender, and sexuality. This is not necessarily
suggests a complex and fluid conception o	**sex**	and gender in the Harappan world
2012		
in relation to factors such as age,	**sex**	and gender, or status, it is an

7.9.2 The use of MALE and FEMALE in the JAMT

FEMALE is used more in the JAMT than in any other journal, at an average rate of 154 pmw. This is also higher than the average rate of MALE (122 pmw). In considering why the JAMT has a higher use of FEMALE, both the collocation and frequency data provide some answers. First, there are two large peaks for FEMALE in 2006 (426 pmw) and 2008 (722 pmw) that contribute to increasing the average score. As shown in Figure 68, the frequency of MALE mostly mirrors the usage for FEMALE, especially from 1994 to 2002 but then the frequency rate for FEMALE increases across the corpus, and is used independently of MALE.

The use of MALE declines slightly over time. The two words show corresponding increases and decreases in 2004, 2008 and 2009, but then MALE occurs less often than FEMALE overall after 2006. Although FEMALE reached a high of 722 pmw in 2009, it subsequently declined to a low of 16 pmw in the following year.

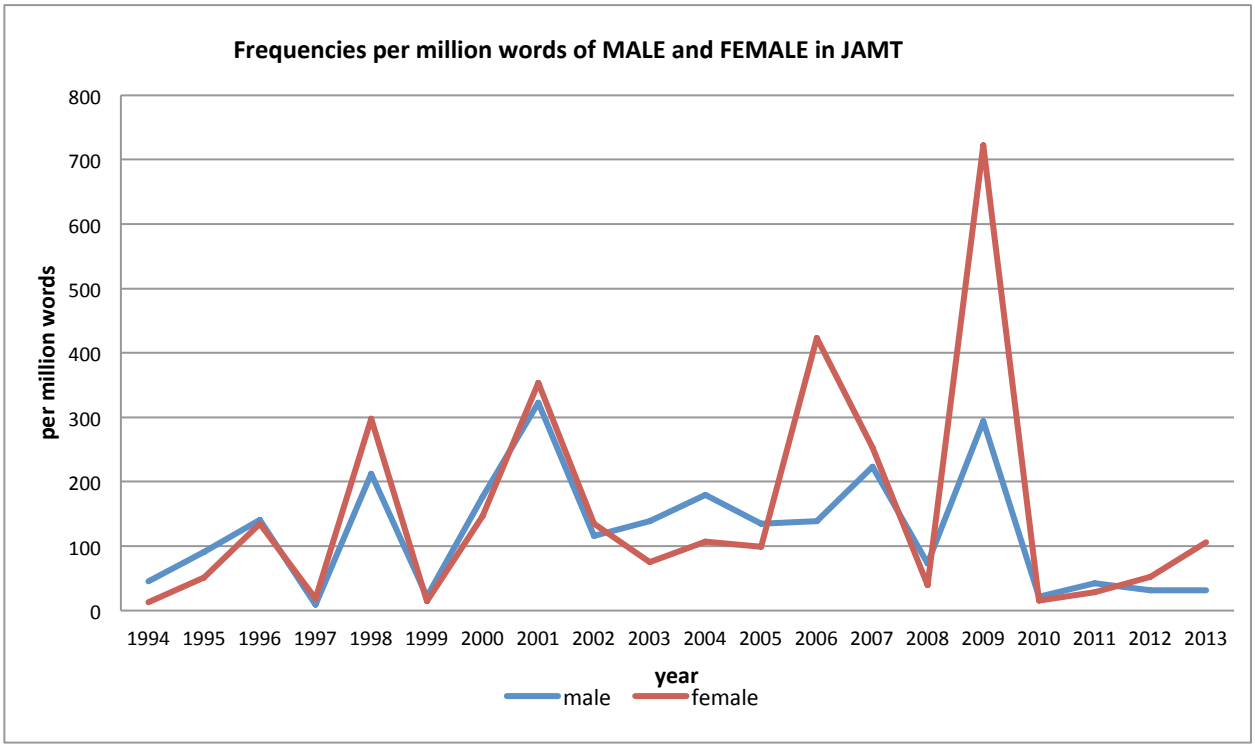

Figure 68: The frequency (pmw) of MALE and FEMALE in *Journal of Archaeological Method and Theory*

The second factor in the high rate for FEMALE in JAMT is the difference in the way the word is used. FEMALE is used more often as a noun modifying another noun, such as *female groups, female potters* and *female bodies.* Examples of this are given in concordance line samples in Table 88. In other journals, collocation results indicate FEMALE is used as a noun in phrases such as *one female* or *a female burial*, and usually with a conjunction, and with WOMEN being the preferred plural term used instead, shown in Table 87. The highest MI Scores were 19.4 *female* for MALE and 19.4 *male* for FEMALE.

Table 87: Top five collocations of FEMALE in JAMT, according to MI-score and frequency by year

FEMALE	1	2	3	4	5
1995	male (7)	-	-	-	-
1996	male (11)	violence(6)	fractures (4)	directed (4)	comparisons (4)
1998	male (13)	may(4)	Palaeolithic (3)	dichotomy (3)	oriented(3)
2000	male (7)	water (6)	Guatemala(6)	potters(5)	pots(4)
2001	male (17)	associated(6)	burial (5)	labor(4)	games (4)
2002	groups(6)	strategies(3)	hunting (3)	-	-
2003	potters(4)	male(3)	-	-	-
2004	male (6)	-	-	-	-
2005	burial(7)	male(6)	mound(5)	tomb (4)	breasts(3)
2006	figurines (16)	Palaeolithic(8)	carcasses (8)	processing(7)	adult(7)
2007	male(14)	authors(14)	women (7)	theory (7)	gender (7)
2009	figurine(17)	male(16)	body(13)	iron (3)	bodies (3)
2012	young (3)	white(3)	pottery(3)	jaws(3)	deer(3)
2013	wild(7)	young(5)	times(5)	social(5)	defense(4)

Table 88: Sample of concordance lines for FEMALE in JAMT

1996		
removed and passed on to other	**female**	family members upon the death
suggested a likely source for this	**female**	violence. Similar documentation of
to increased Middle and Late Woodland	**female**	mobility compared to male. Male
2000		
the most glaring example concerns	**female**	leadership. Although feminist
intermittent. Although directed by the	**female**	potters, the fabrication of pots
The key symbols of	**female**	identity in Achuar and Quichua belief
2006		
where it is actually the female	**female**	signatures that become local over
of all but one of the	**female**	figurines at Brassempouy in 1892
to demonstrate the research potential of	**female**	figurines when studied according to 21st
2012		
decades into the mission period, a few	**female**	elders who had grown up on the
Iroquois, where pottery production is primarily a	**female**	craft activity
interpretation). However, it is also likely that	**female**	visitors both from different matrifamilies

Table 89: Top five collocations of MALE in JAMT, according to MI-score and frequency by year

MALE	1	2	3	4	5
1995	female (7)	adult (3)	-	-	-
1996	female (11)	male (6)	relationship (3)	period(3)	comparisons (3)
1998	female (13)	room(3)	elite(3)	dichotomy (3)	-
2000	female (7)	relatives(5)	relative (4)	potters(4)	politics(3)
2001	female (17)	occasional(15)	arrow (10)	games(5)	burial (5)
2002	least(4)	groups(4)	adult (4)	shell (3)	bracelets (3)
2003	potters(9)	spaces(3)	public(3)	female(3)	-
2004	guests(7)	space(6)	female(6)	host (5)	toy(4)
2005	burial (8)	ramp(11)	female(6)	pit(5)	log(5)
2006	female (6)	-	-	-	-
2007	female (14)	gendered(6)	theory(5)	authors(5)	women (4)
2009	female (16)	ritual(5)	body(4)	figurine (3)	bodies (3)

The results for MALE in Table 89 show some noticeable differences between the MALE and FEMALE collocations, though both data sets are relatively small. FEMALE and *figurine(s)* did not occur at all in the collocation results for MALE, whereas MALE occurred with *space(s).* Both words were used in the context of iconography and production.

7.9.3 The use of WOMEN and MEN in the JAMT

The results for WOMEN and MEN in Figure 69 resemble a bell curve more than any results in the study. Low rates of both words of around 100 pmw occur from 1994 to 1997 and then again from 2010 to 2013. WOMEN has four main peaks or years in the 'middle':1998 (1040 pmw), 2001 (1400 pmw), 2004 (998 pmw) and 2007 (1382 pmw). Overall, the average for WOMEN is around 515 pmw. MEN has two main peaks: one in 2000 (1365 pmw) and another in 2004 (819 pmw), with smaller rises in 1998, 2007 and 2009. Overall, the rate for MEN is almost half that of WOMEN at 274 pmw. Figure 69 shows that when MEN does occur, it is usually in tandem with WOMEN, but the reverse is not true. The very high content of WOMEN in 2001 is because of a range of papers with content around women that discuss matrilocality, childhood, and the disenfranchised, and in 2007, because of a special feminist-focussed issue.

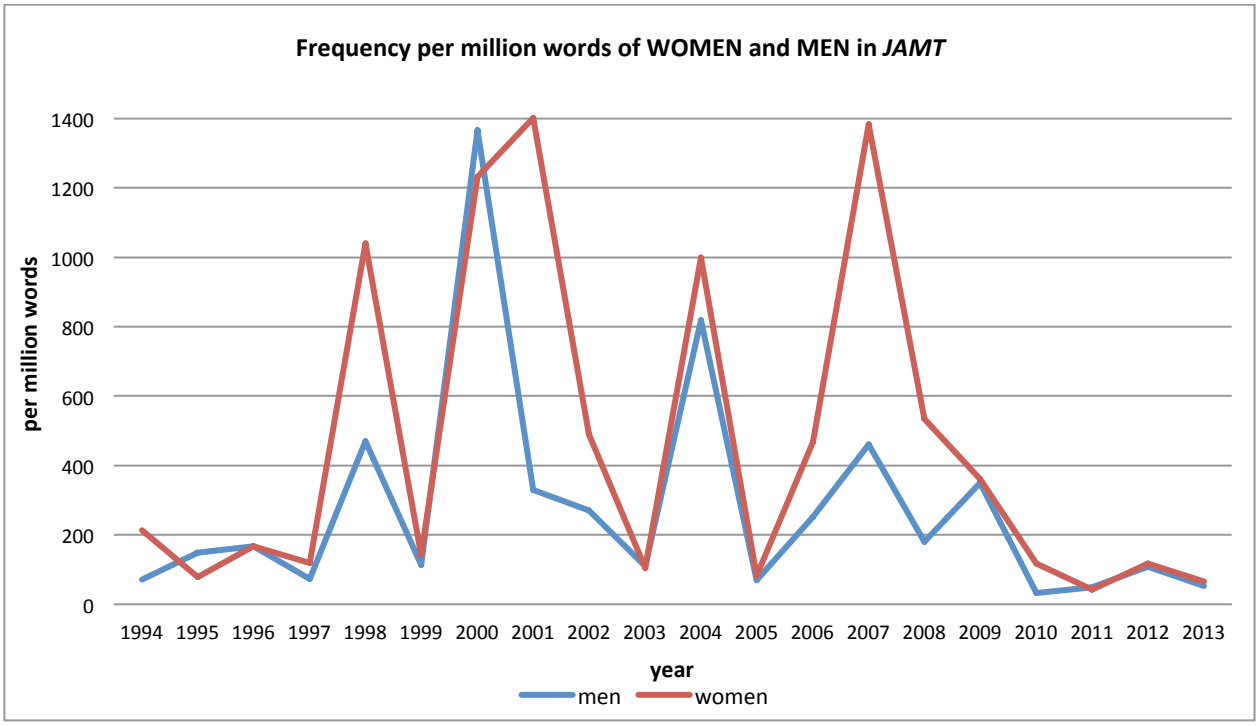

Figure 69: The frequency (pmw) of WOMEN and MEN in *Journal of Archaeological Method and Theory*

The collocations in Table 89 and 90 reflect the chart data in so far as MEN is frequently used in combination and at the same rate as WOMEN. MEN is also used most often with WOMEN, but *prehistory, archaeology*, and *pottery* are also words with significant results.

Table 89: Top five collocations of WOMEN in JAMT, according to MI-score and frequency by year

WOMEN	1	2	3	4	5
1994	prehistory(9)	production(4)	roles(3)	work(3)	men(3)
1995	men(4)	-	-	-	-
1996	men(4)	-	-	-	-
1997	prehistory(3)	-	-	-	-
1998	men (30)	archaeology(11)	prehistory(8)	space(7)	gender(7)
1999	pottery(5)	invented(4)	-	-	-
2000	pottery(30)	other (28)	political(25)	men(25)	bowls(15)
2001	played (120)	split(40)	stick (30)	men(22)	bone(15)
2002	men(15)	children(13)	hunting (10)	work(9)	net(6)
2003	men (5)	more(3)	-	-	-
2004	men (70)	political(21)	visiting(15)	alliance(11)	spaces(10)
2006	men (11)	children(5)	Kung(4)	among(4)	cite(4)
2007	archaeology(36)	men(19)	studies (18)	gender (16)	feminist (16)
2008	men (11)	group (10)	domestic(8)	older (7)	vessels (6)

2009	men(12)	children(9)	young(5)	mature (4)	blood (4)
2010	making (6)	potters (4)	home(4)	social (3)	comales (3)
2012	men (8)	law(5)	used(4)	young(3)	depicted(3)
2013	men(7)	hunting(4)	children(4)	procured(3)	fish(3)

The collocations for WOMEN in Table 89 can be grouped according to their emergent semantic clusters. These are:

1. Identification (relational/kinship/binomial pair): men, children, group, young, mature, older

2. Performance: production, role, work, hunting, making, procured, played, invented, used, net, fish, law, political, visiting, alliance, spaces, home, social, pottery, vessels, bowls, potters

3. Discipline: archaeology, prehistory, engendering, gender, feminist, studies, cite

Overall, the JAMT has a focus on what women *did* in the past, and the application of gender theory to women.

Table 90: Top five collocations of MEN in JAMT, according to MI-score and frequency by year

MEN	1	2	3	4	5
1994	women(3)	-	-	-	-
1995	women(4)	-	-	-	-
1996	big(4)	women(4)	myths(4)	ancient(4)	academic(4)
1998	women (30)	medicine(6)	house(6)	business(3)	away(3)
2000	big(136)	great(47)	women(25)	societies(14)	chiefs(14)
2001	women(22)	played(13)	both (5)	work(4)	split(4)
2002	women(15)	labor(4)	children (4)	prehispanic(3)	net(3)
2004	women(70)	visiting(18)	political(16)	area(13)	spaces(10)
2005	women(6)	cultural(3)	-	-	-
2006	women(11)	same(5)	work(4)	comprise(4)	more(4)
2007	women(19)	built(8)	stated (6)	wealth (4)	houses (4)
2008	gender(12)	things (8)	objects(7)	shell(7)	use(6)
2009	women(12)	village(8)	house(8)	young (7)	groups(6)
2012	women (8)	two(4)	-	-	-
2013	women(7)	hunting(4)	children(4)	procured(3)	fish(3)

The collocations for MEN in Table 90 can be compared when they are grouped according to the same emergent semantic clusters. These are:

1. Identification (relational/kinship/binomial pair): women, children, groups, big, young, two

2. Performance: work, labor, hunting, spaces, built, village, house, houses, area, societies, wealth, cultural, procured, use, fish, things, objects, political, chiefs, business, medicine, great, played, myths

3. Discipline: academic

There was similar focus on what MEN *did* in the past, but a major point of difference was about *where* they did it. This difference in focus on the built landscape is shown in the words *spaces, built, village, house, houses* and *area.* The words *space* and *spaces* also occurred with MALE, but not any other keyword. The appearance of *objects* and *things* is also a unique combination. The other obvious point of difference is that there is no real relationship to the theme of gender theory in archaeology, as is mostly the case for MEN across the corpus.

7.9.4 The use of MAN and WOMAN in the JAMT

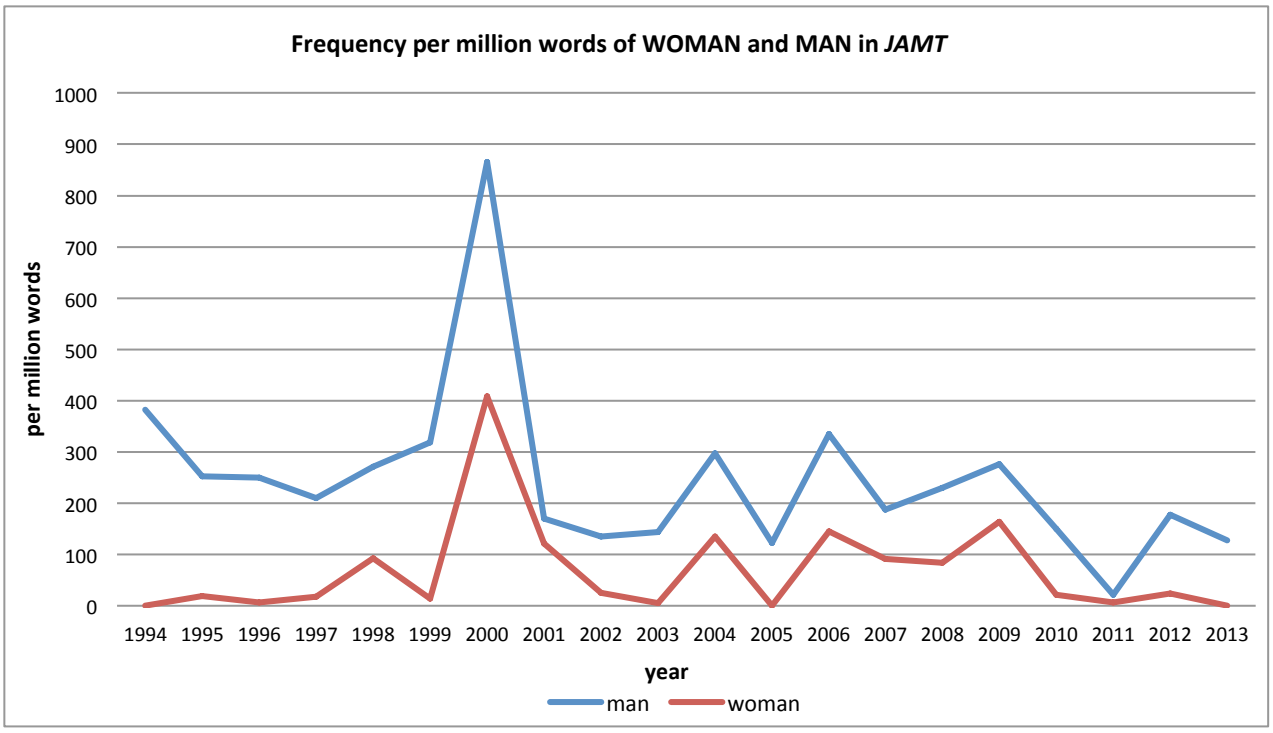

Figure 70: The frequency (pmw) of WOMAN and MAN in *Journal of Archaeological Method and Theory*

Figure 70 shows a clear correlation between the use of MAN and WOMAN from 1999 to 2011, because, when the frequency of MAN increases or decreases this affects the rate of WOMAN. This signals that the words are used as a binomial pair in these years. Figure

70 also shows that MAN is always used at a higher rate; rates for WOMAN were between zero and 10 pmw in many years of the corpus, with only one peak of 408 pmw in 2000. It was presumed the overall rate for WOMAN would be higher than MAN, as FEMALE and WOMEN were both used more often than their binomial pairs in the JAMT, but this is not the case. MAN is used at an average of 246 pmw, which is more than three times the average of WOMAN at 69 pmw. Given the recent establishment of JAMT and its contemporary theoretical themes, it was assumed that MAN was not used as a substitute for HUMAN, but in some other way. The collocation results in Table 91 were not altogether enlightening, thus a selection of concordance lines in Table 92 were scrutinised for further context.

Table 91: Top five collocations of MAN in JAMT, according to MI-score and frequency by year

MAN	1	2	3	4	5
1994	women(3)	-	-	-	-
1995	ship(6)	national(5)	early(4)	bones(3)	olympic(3)
1996	old(11)	cave(6)	museum(3)	big(3)	archaeological(3)
1998	Plog (5)	two(4)	dead(4)	woman(3)	-
1999	big(10)	societies(4)	dead(4)	culture(4)	decorations(3)
2000	big(94)	great(19)	chief(10)	societies(8)	-
2002	ice(3)	-	-	-	-
2004	trade(5)	networks(5)	-	-	-
2006	archive(8)	art(5)	figurine(4)	aboriginal(3)	fragment(3)
2007	ice(4)	colonial(4)	museum (3)	-	-
2008	flint(5)	-	-	-	-
2009	ice(17)	big(5)	body(5)	poor(3)	chief(3)
2010	science(4)	environment(3)			
2012	old(8)	northeast(4)	early(4)	made(3)	hunter(3)
2013	early(5)	science(4)	evidence(4)	quaternary(3)	nature(3)

Table 92: Sample of concordance lines for MAN in JAMT

1995		
Incisions, breakages and charring, some probably	**man**	-made, in fossil bones from Mammoth
petty hierarchy with a Big	**man**	or chief; and (5) multilevel, paramount chief
in the bog matrix surrounding Lindow	**man**	were used to interpret the local
1999		
distribution from a central place; and	**man**	trading. The fall-off

middle		
have been greater than those involving only	**man**	Similarly, pottery used for to investigate the vessel
social, and economic realms may make a	**man**	a Big Man, but only with material
to the land of the dead. A	**man**	for example, was typically buried with his
2004		
known as the ajitz, a	**man**	or a woman who is commonly believed
brother Karttikeya is represented as a young	**man**	who rides a fast peacock. When
the experience of closed social groups. The	**man**	who has that experience
they sat down on their benches, each	**man**	according to the rank he held
2009		
hamlet minimally had to have a	**man**	who is an effective hunter and fisherman
in his landmark study of big-	**man**	societies. On the one hand, a
acuity, forcefulness, and determination. A	**man**	who was halinya radiated a dangerous potency,
might otherwise erupt into violence. If a	**man**	was derelict in paying for a pig
war. But since that time the white	**man**	came and stopped up that stream of

There were three major ways MAN was used in context. First was in the context of ethnographic/anthropological research and in the use in direct quotes from sources. Second was in the critique of 'man the hunter' and 'cave man' narratives in archaeology, and also to refer to ethnicity, such as 'white man' or 'Iroquois man'. The third context was MAN used as a gender-marking suffix. This is archaeology specific, with Big Man, Mungo Man, Lindow Man and Kennewick Man (amongst others) occurring in many papers, and not reflective of gender bias. The highest MI score was with *big* (14.71), as in 'Big Man'. However, there was a higher than expected functionalization of the man suffix with role-based nouns, such as in *craftsman, fisherman* and *middleman*. These types of words did occur in early issues of AA, HA and AAA, but are infrequent in JSA and ARCH and indicate perhaps a subconscious male bias by individual authors.

This type of gendered suffix did not occur for woman. The collocations in Table 93 reflect limited discussion in terms of a single female identified in the archaeological record. It was expected that there would be more occurrences of the phrase 'woman the gatherer' in reference to 'man the hunter', but this did not occur with any significance. The highest MI score was with *alliance* (18.91), used in terms of a woman signifying their political alliance in the painted decoration of their domestic pottery, and an elite woman as an alliance partner.

Table 93: Top five collocations of WOMAN in JAMT, according to MI-score and frequency by year

WOMAN	1	2	3	4	5
2000	each (10)	alliance(7)	made(6)	every(5)	similarity(5)
2001	game(6)	-	-	-	-
2006	long(3)	-	-	-	-
2007	ideology(4)	home(4)	politics(4)	antiquity (3)	American(3)
2009	young(4)	-	-	-	-

7.9.4 The use of PEOPLE and HUMAN in the JAMT

The JAMT began publishing in 1994 which was after the generic 'man' was abandoned in favor of words such as 'person', 'humans' and 'humankind'. The widespread adoption of this change is apparent in the JAMT, as HUMAN has the highest usage of all the keywords, at a rate of 1363 pmw. Figure 71 also shows consistent increased uptake of HUMAN over time, and a large peak of 3560 pmw in 2010. This is in tandem with the use of the word PEOPLE, also a 'replacement' word for MAN. PEOPLE is used less frequently overall than HUMAN at 738 pmw, which is at a ratio of approximately 2:1, but is a rate that also increases over time. Figure 71 demonstrates that there is no real relationship between an increase in frequency (pmw) of HUMAN with PEOPLE, but there is a decrease in the frequency of HUMAN when PEOPLE increases in 1997, 2000 and 2004.

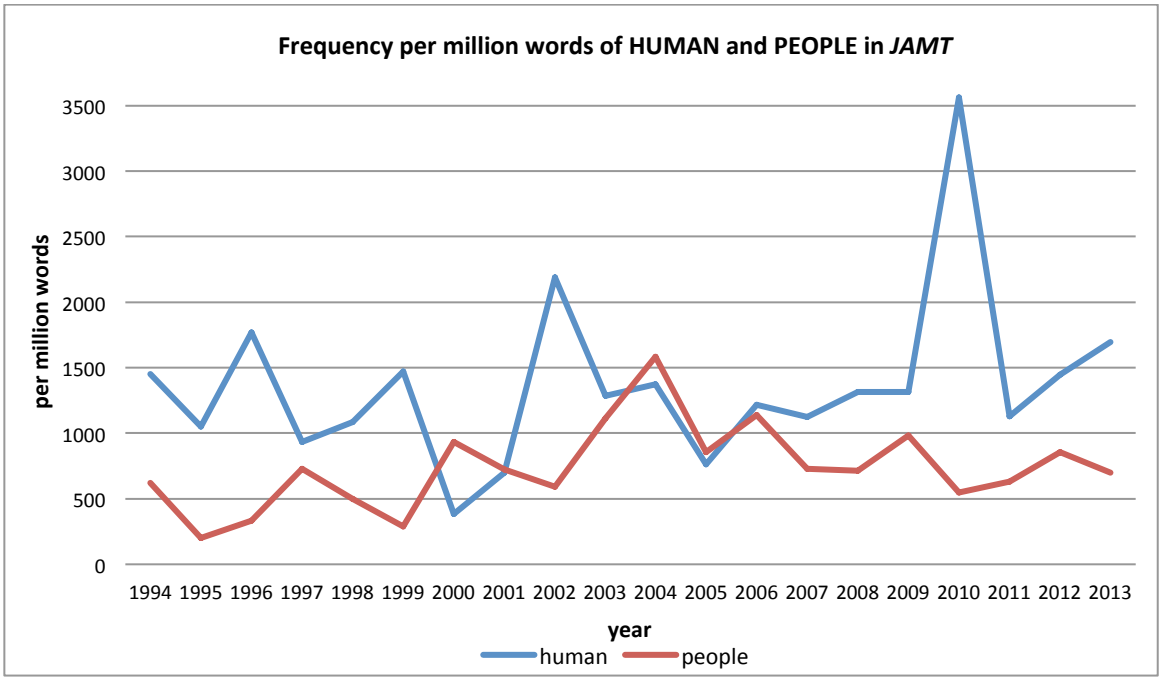

Figure 71: The frequency (pmw) of HUMAN and PEOPLE in *Journal of Archaeological Method and Theory*

The differences in use for PEOPLE and HUMAN are displayed in the collocation results in Tables 94 and 95. Neither demonstrate a significant correlation to the theme of gender, or to the other selected keywords. The trends that emerge from the results over time show that HUMAN is most commonly used as a noun modifying other nouns. There are a high number of words in the 'identifiers' group, and most discussion is around analysis of human population, remains, diet, burial data and evolution. There is a focus on scientific methods, in keeping with the journal's overarching themes. PEOPLE, in contrast, is used most often in the context of *artefacts (things*, and *objects*), *relationships (social, between, other* and *interactions*), and *quantities (numbers, groups, more, one*, etc.) The highest MI score for HUMAN was *interaction* (14.1), and *relatives* for PEOPLE (13.3).

Table 94: Top five collocations of PEOPLE in JAMT, according to MI-score and frequency by year

PEOPLE	1	2	3	4	5
1994	history(30)	social(6)	different(6)	without(5)	relations(5)
1995	made (3)	-	-	-	-
1996	other (4)	record(4)	between (4)	other(4)	relationships(4)
1997	history(12)	stolen(4)	state(4)	Europe (4)	honor(3)
1998	objects (12)	artifacts(5)	interactions(5)	life(5)	numbers(4)
1999	pottery(5)	one(4)	between(3)	about(3)	-
2000	pottery(13)	other (12)	between(7)	interaction(6)	groups(6)
2001	early (7)	used(5)	objects (5)	fact(5)	region(4)
2002	Palaeolithic(7)	number (7)	use (6)	hunted(4)	quantities(4)
2003	used(8)	area(8)	sedentary(7)	other(7)	living(6)
2004	places (14)	between(13)	interactions(10)	group(8)	ritual(8)
2005	things(11)	objects(11)	social(7)	agency(7)	groups(6)
2006	artifacts (22)	other(11)	interactions(10)	numbers(4)	local(4)
2007	other(5)	ancient(5)	used (4)	research (4)	Palaeolithic (4)
2009	other(9)	more(9)	among(9)	groups (7)	vessels (6)
2010	things(9)	other(8)	time(6)	between (6)	landscapes (4)
2011	things(12)	interactions(8)	artefact(5)	actions(4)	built(4)
2012	other (14)	groups(12)	hunting(10)	indigenous(9)	experience(8)
2013	objects (13)	social(10)	other(8)	different(8)	movement(7)

Table 95: Top five collocations of HUMAN in JAMT, according to MI-score and frequency by year

HUMAN	1	2	3	4	5
1994	bone(35)	prehistoric(19)	analysis(17)	diet(12)	remains(12)
1995	evolution(25)	activities(12)	remains(10)	bones(10)	skeletal(10)
1996	skeletal(63)	behavior(48)	remains(21)	bone(13)	evolution (13)
1997	land(13)	bone(11)	behavior(11)	natural(10)	evolution(10)
1998	evolution(29)	remains(28)	skeletal(15)	behavior(13)	new(10)
1999	population(27)	maize(22)	behaviour(17)	adopting(15)	social(11)
2000	behavior(10)	evolution (5)	production(4)	origins(4)	life(4)
2001	population (24)	maize(14)	ecology (9)	behaviours(9)	structure(8)
2002	population (19)	behavior(19)	diets (18)	changes(17)	action(15)
2003	subsistence (20)	impacts(13)	use(11)	ecology(11)	beings(11)
2004	animal (8)	agency(8)	natural(6)	experience(6)	behavior(6)
2006	evolution (33)	behaviour(14)	enamel(12)	bones(11)	archaeological(10)
2007	evolution (40)	modern(23)	behavior (20)	factors (15)	brain (13)
2008	non (63)	agents (35)	between(30)	interactions (27)	social (21)
2009	body(34)	animal(26)	representations(19)	figures(14)	remains (13)
2010	activities (99)	evolution (66)	behavior(57)	niche (52)	construction (41)
2011	behavior (29)	evolution(28)	social(12)	visual(10)	culture(9)
2012	dog(4)	diet(27)	dietary(25)	isotope(24)	non(22)
2013	evolution(91)	modern(54)	populations(36)	behavior(32)	early(23)

7.9.4 The use of CHILDREN and FAMILY in the JAMT

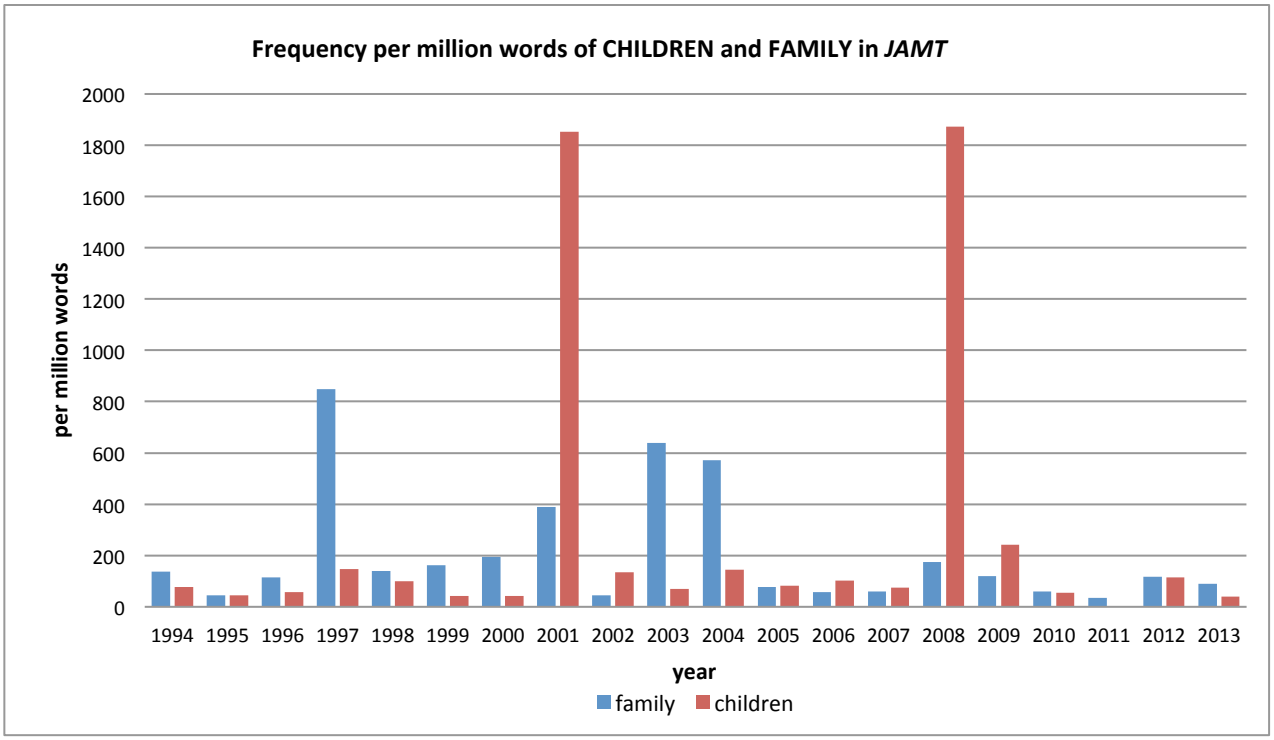

Figure 72: The frequency (pmw) of CHILDREN and FAMILY in *Journal of Archaeological Method and Theory*

CHILDREN and FAMILY both occur more often than SEX, WOMAN, MASCULINE, FEMININE, MALE, and FEMALE across the JAMT corpus. Figure 72 displays the relationship between the words and their rates across time. There are two large peaks for CHILDREN—1851 pmw in 2001 and 1872 in 2008. In 2001 there was a zero score, and the rest of the results fell below 200 pmw, with an average of 246 pmw. There is no correlation of increased rates in CHILDREN and FAMILY. The results for FAMILY are also characterised by a series of small peaks and troughs, with a high of 849 in 1997 and an average of 204 pmw. Overall, FAMILY shows a declining trend line across time.

The collocations for CHILDREN are given in Table 96. The word occurs most frequently with WOMEN (26 times), but the occurrence of MEN in 2002 and 2004 indicate use as the semantic unit, 'men, women and children'. The highest MI score for CHILDREN was

with *childhood* (16.59). The emergent categories primarily concern 'identification' as well as associations with activity and play.

Table 96: Top five collocations of CHILDREN in JAMT, according to MI-score and frequency by year

CHILDREN	1	2	3	4	5
1994	presence(4)	household(4)	-	-	-
1997	deaths(4)	-	-	-	-
2001	work (27)	adults(21)	prehistoric (17)	play(17)	activities(10)
2002	women (13)	men(4)	-	-	-
2004	women (4)	men(4)	-	-	-
2008	childhood (30)	material (25)	play(24)	archaeological (23)	activities(18)
2009	women(9)	making(8)	value(6)	group(5)	Papua New Guinea (4)

Significant content on FAMILY concerns its size and structure, and as a unit of production. The words nuclear, wife, husband, female, children and household indicate modern, Western family units.

Table 97: Top five collocations of FAMILY in JAMT, according to MI-score and frequency by year

FAMILY	1	2	3	4	5
1994	nuclear(5)	extended(5)	augmented(4)	nineteenth(4)	household(3)
1997	festive(14)	labor(13)	projects(7)	members(6)	extended(6)
1998	members(3)	female(3)	-	-	-
1999	property(4)	group(4)	social(3)	one(3)	-
2000	members(6)	group (5)	workshops(4)	language(4)	Congo(3)
2001	wife (7)	husband(7)	residence (6)	other(5)	nuclear(4)
2003	members (18)	private(14)	farming(6)	spaces(5)	wooden(5)
2004	groups (42)	midden(27)	one(13)	members(11)	number(10)
2008	social(4)	children (4)	nuclear(3)	-	-
2009	nuclear (6)	unit (3)	-	-	-
2010	nuclear (6)	unit (3)	-	-	-
2012	generations(3)	papers(3)	operations(3)	historical(3)	based(3)
2013	evolution(91)	modern(54)	populations(36)	behavior(32)	early(23)

The results in this thesis expose where gender theory has permeated research methods, themes and discussions. However, in considering the impact of gender archaeology, there is a lingering concern with the issue of how gender theory intersects with practice and process. The research question that remains is thus, when applying a gender framework to a research methodology, does it impact results?

In order to answer the question of how gender theory might be applied in a practical sense, and to gauge the efficacy of the arguments made in Sections One and Two of this thesis, a case study was necessary. This is also a way of checking the validity of the methods that have been used, similar to a procedure used when working in the field. Triangulation is a process often undertaken as a means of ensuring the accuracy of trench grids and survey areas. It is derived from surveying techniques that "determine a single point in space with the convergence of measurements taken from two other distinct points" (Rothbauer 2008: 892). CDA also involves a type of triangulation, for example, Van Dijk (2006:115) describes his approach as having a "theoretical framework [that] is multi-disciplinary, articulated by the fundamental triangulation of discourse, cognition and society". In addition, Baker and Levon (2015:223) applied the concept of triangulation whereby the two researchers separately analysed the same corpus then compared results. The case study of an archaeological site–St John's, in South Australia-thus forms a triangulation with the literature review and language study in this thesis. Interweaving multiple lines of evidence and archaeological sources of data, it complements and informs the study of archaeological discourse, enabling an analysis of the micro-context. In addition, context models may represent communication situations at various levels of generality or granularity (van Dijk 2008:19). That is, the one paper written in one journal, on the micro-level, can be situated within the overall, historical analysis of the corpus – the macro context. Further, feminist self-reflexivity must extend beyond a position of

theoretical critique to include one's own academic and other practices. This paper was written with gender theory 'in mind', and with the aim of convincing the reader of the validity of gender as part of the archaeological tool-kit.

The St John's site was selected as the case study as it demonstrated high potential to determine and evaluates how, when gender is applied to the core of a research design, more gender-nuanced readings of the archaeological record might result. The project was undertaken in parallel to the language study, as a way of exploring what gender 'does' archaeologically, to fill in the identified 'silences' that lie between the literature review (i.e. theoretical issues) and the results of the language study (the research outputs). On the completion of this practical component, the results were published in *Archaeology in Oceania* in 2015 (Appendix 9). Subsequently, it was decided that this research 'output', could also be used as a means to test the methods developed in Chapter Five. In essence, the case study lent itself to being subjected to a critical discourse analysis, and to forensically examine. This is also because there were discreet phases of occupation, with only male residents, then only female resident, and at a time and culture where the enactment of strict feminine and masculine roles was important.

In the published analysis of the data from this site, it was aimed to move beyond the simplistic equating of female/male presence with female/male material culture, and on to concepts of social masculinity and femininity in order to explain the spaces through which men's and women's roles were constrained and enabled. The paper also advocated moving beyond tokenistic inclusion of gender as a mnemonic for women in order to produce meaningful interpretations of masculinity and femininity. In this way, it was gender cognisant, and the concepts of gender, in terms masculinity and femininity, should have, in effect, been high frequency words-certainly much higher than the average articles in the corpus data, and even those with some gender content. As a case study, it allows a certain degree of generalisation about what constitutes a paper that would have above average 'gender' content. It was not written with a critical discourse analysis in mind, and content was altered after comments from two reviewers and again

after suggestion from the journal's editors. In light of my own work in the area of gender in archaeology, the article should in theory, serve as a 'benchmark' of keyword frequency, a 'how to' for gender theory in archaeology. But was it?

7.10 Results of the methods applied to the case study: the micro context

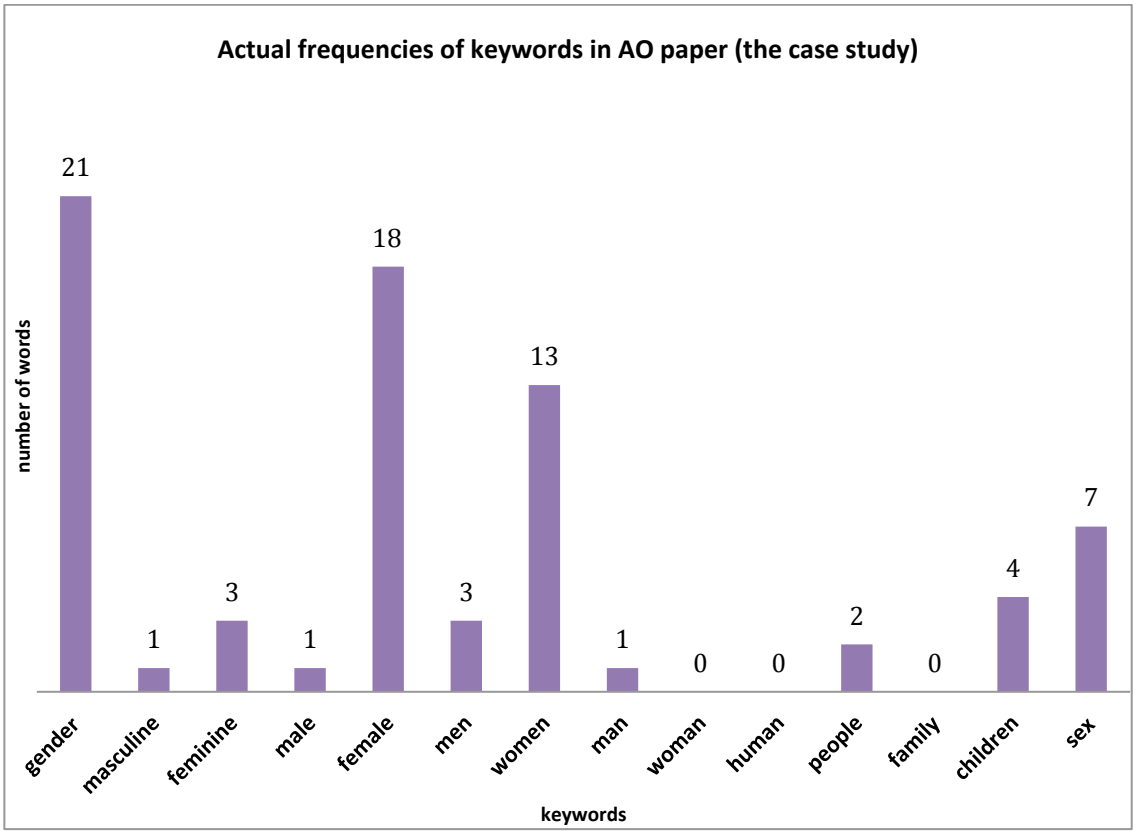

Figure 75: Actual number of keywords appearing in the paper 'Corporal Punishment and the Grace of God' The Archaeology of a 19th Century Girls' Reformatory.

The results for the case study (Appendix 9) are expressed graphically as the actual frequency of the keywords (Figure 75). This clearly demarcates the difference between the highest frequency words—GENDER (used 21 times) FEMALE (18) and WOMEN (13)— and the lowest frequency words—WOMAN, HUMAN AND FAMILY (words not used). The total number of words in the article was 4920 (excluding references and captions). These numbers can be interpreted as an indication of the above average content of 'gender' focussed discussion. The content around women is higher than men and as was the case in the corpus, more often associated with gender. The traditional

male/female dichotomy is not reflected in the content, with for example, MALE (1) to FEMALE (18) word counts not occurring together nor at about the same rate.

GENDER (21) occurred at the highest rate and in often in combination with FEMALE (18) and it could be inferred that, in only looking at the data, as gender is a term closely associated with women. Most surprising was the very low frequency of both MASCULINE (1) and FEMININE (3), given that these terms are advocated throughout this study as being key words associated with gender as a social process (for example, traditional masculine roles, historical feminine behaviours, etc.). SEX was used seven times, and not with GENDER, but in the context of *sexuality.* Both MEN (3) and CHILDREN (4) can be viewed as secondary sources in the paper.

Overall, the pattern of keyword usage in my own paper is similar to the results in the corpus, and as such, this indicates there may be a particular 'style' to gender archaeology. The bigger question is perhaps, whether such work through the process of editorial input and academic 'training ' is consciously or subconsciously 'fitted' into the dominant paradigms in archaeology.

7.11 Summary of results

The results in this thesis can be read and be seen together as a metaphorical landscape, the graphs a physical rendering of the topography of gender in archaeology. This landscape is characterised by peaks and troughs, but overall one that is marked but subtle shifts and minimal impact on the geography.

The major trends can be summarised as follows:

- The results across the journals are, on the whole, similar. Each journal is characterised by the same occasional spikes in keyword frequency, with no significant increasing change over time. The trends in the three more recently established journals, JSA, ARCH and JAMT have not included more gender themed research articles than AA, AAA or HA.

- There are no marked international differences. There is some difference in content in the Australian based journal (AAA), as presented in the collocation tables. Overall, the content on gender is minimal across regions and countries.
- Some words more important to the discussion of gender than others: family and children were related terms but the relationships between gender and women were strongest.
- Gender is most often associated with women (as gender is used the opposite to male/men) while the generic human is occupied by the male norm. There is a clear trend for women to be 'marked' for gender, and thus gender is inapplicable to men, whereas the male terms are consistently used to encompass people of both sexes.
- An intrinsic male hegemony frequently serves to maintain the binary sexual division of labour and the ongoing issue of the 'visibility' of women in the archaeological record is only in terms of the uncommon or unusual symbols, artefacts, human remains and loci. Many writers continue to use mechanisms by which the associated subordination of women has been accomplished. One of the most common mechanisms is the establishment of the domestic and reproductive spheres as natural or appropriate to women and the persistence of the male as universal research subject.
- Women are rarely the subjects of archaeological enquiry. Women in archaeology are mostly discussed in terms of current equity issues in the discipline.
- The terms 'masculine' and 'feminine' are rarely used in archaeological writing. Masculinity is emerging as a standalone subject, but femininity is not.
- There is a clear 'template' or style for research articles; content on gender may be reduced or edited to 'fit' what is accepted to be a rigorous academic standard.
- 'Gender archaeology' has become a term used in the same way as 'historical archaeology' or 'classical archaeology'. This is unique to archaeology and is also used as an umbrella terms for women and feminist issues. The semantics of gender-related terms are not stable over time, but are subject to change.

The results, at the very least, show there is a resistance to the inclusion of gender theory in the archaeological journals studied. But they also demonstrate the deep-rooted, unobtrusive male bias, which is constant in archaeology. There is a demonstrated, widespread aversion to the application of gender theory, with few methodological or theoretical applications of these are evident in the concordance lines and in the collocation data. There is also a lack of systematic study on women in the past. In spite of assertions to the contrary (Hadley and Hemer 2014), there has been no unequivocal change in the landscape of publishing.

Engelstad (2007) refers to the influence of feminist and gender theories in archaeology as simply a "cosmetic change" to our interpretations of past societies. The research in this thesis supports this viewpoint.

CHAPTER EIGHT

LANDSCAPES OF GENDER: DISCUSSION

This thesis analyses the place of gender theories and their impact and uptake in six archaeological journals. It also provides a diachronic analysis of gender and gender representation by establishing and scrutinising how females and males are signified in text. While the study is unusual for archaeology in terms of what is analysed and the methods employed, the focus is, however, on the reciprocal relationship between language choices and the epistemological and cultural values of the discipline. In this chapter a synthesis and discussion of the most salient results provide insight into the overarching discourses on gender in the discipline, using three main categories: absence, attribution and ambivalence. It then reflects on, and answers, the questions posed at the beginning of this thesis.

8.1 The Three As of Gender in Archaeology: Absence, Attribution and Ambivalence

In interpreting the results of the study, it became apparent that there were three main, recurrent themes that emerged in the way gender was used and applied in the corpus: *absence, attribution* and *ambivalence.* These themes relate to the content and trajectory of research over time, and the specialised meaning of gender and its related terms within archaeology. These groupings are not intended to be exhaustive or exclusive. They are used to explore the most significant implicit and explicit gender discourses.

8.2 Absence

> The effigies of twenty highly distinguished families, Manlii, Quinctii, and others equally aristocratic, headed the procession. But Cassius and Brutus were the most gloriously conspicuous - precisely because their statues were not to be seen. (Tacitus Book III: 75; Grant 1956 translation)

It may seem peculiar to lead with the concept of 'absence' when the crux of this study is examining what is 'present' in the corpus: keywords, collocations and concordances.

Nevertheless, absence is the most striking feature of the results. Gender was most conspicuous by its absence; the missing discourses on gender (and its associated concepts) are the principal, critical feature that emerged from the results of the study. The analysis of this 'absence' is premised on Hall's (1985:109) statement that 'meaning is relational within an ideological system of presence and absence'. Across the journals and over time, content on gender is at best tokenistic, and at worst, insignificant. This was blatantly obvious when simply considering the total average frequency of the word GENDER itself across all journals and over time: 261 times in a million. Put another way, if one million words were written in a document, at an average of 500 words per page- around 2000 pages–then the number of times the word GENDER occurs would make up about half a page. Further, this average pmw result is largely because of special issues and one-off articles on the subject. By linking the data from Figures 12 to 72 to the literature review in Section One of this thesis, it is clear that a higher count (or 'peaks') for frequency results are the result of triggers such as events (conferences in the 1990s) or special issues on gender (from 1990 to 2013) where keyword frequency suddenly spikes. For example, the highest score for the keyword GENDER in the entire corpus is in HA in 1991, a result of a special issue entitled 'Gender in Historical Archaeology'.

At start of this thesis the question was asked:

- has there been an increase or decline in the publication of gender and its related concepts in journals?

In light of the keyword results, it is evident there has been **no** sustained inclusion or growth in content on gender and its related concepts over time. It is a subject that comes in and out of focus. In the 1990s this followed trends, and after 2000 it seems to appear after 'gaps' on the issue. The series of peaks and troughs, rather than linear progressions or bell curves, are evidence that the theme of gender is fundamentally cyclic, but also that it remains a polarising issue: an author either does or does not include the topic. Given the small amount of content exposed, it is possible to link the increase in word frequencies to individual papers, demonstrating that there are clear

advocates who are publishing on the subject, rather than a collective who are using gender as a fundamental component of their social analyses. Gender has not permeated the discourse on social archaeology, or the wider research methods of the vast majority of articles in the corpus.

The peaks and troughs which characterise the keyword results also support Nelson's (2006) argument that there never were three main 'waves' of feminism in archaeology, unlike in other social sciences. In contrast, the results establish that in the decade from 1990 to 2000, gender theory significantly rose (inconsistently), but then peaked and subsequently declined. GENDER was used at an average of 250 pmw in HA, AA and AAA, where in prior decades it was used at a rate of 2.5 pmw. There was perhaps 'a' wave of feminist-inspired gender studies, with the period after 2010 thus characterised as post-feminist due to the decline in content. While overall there is clear evidence of a substantive increase in use over time, and of the study of gender having some 'general' relevance, there is also clear indication of how marginal concern with the topic has been, and continues to be. This can be considered in terms of the relative content on 'social' archaeology through a comparison of the frequency of the benchmark keyword PEOPLE. In the decade 1990 to 2000, PEOPLE is used on average at a rate of 830 pmw; at its peak GENDER is used two thirds less often at 260 pmw. In the JSA, ARCH and JAMT (which are some of the most socially focussed journals in the discipline), the average use of GENDER in the decade from 2000 to 2013 is slightly better at 385 pmw.

The most overwhelming absence in the results was in terms of the keywords FEMININE and MASCULINE, and hence any discussion and content around the terms. Overall, masculine/masculinity and feminine/femininity occur extraordinarily minimally in the corpus. GENDER was also rarely found in conjunction with masculine or feminine, despite these words (and concepts) being routinely associated with one another in common usage. In all journals studied they were terms used least often, and were entirely absent from most papers, even in the JSA, HA and ARCH. Neither keyword increased nor decreased, but flat-lined across all journals and over time. For example, it was

hypothesised that in the JSA, the words FEMININE and MASCULINE would be used with relative frequency, and more often than in other journals, as they are common concepts associated with discussions of social gender, sexuality, queer archaeology, and related topics. The results, however, show no collocations for GENDER and FEMININE or MASCULINE, and that the concepts are not used or linked. FEMININE is surprisingly obscure in light of the journal's avowed themes, and when used, the collocation data shows this is in terms of the analysis of women's roles/work and 'feminine' imagery.

While the vast majority of research articles across all journals used neither FEMININE nor MASCULINE, for those papers where these terms did occur MASCULINE was used more often (at an average rate of ten pmw), than FEMININE (seven pmw). These numbers are small, but are also reflective of a specific focus on masculinity in a small number of papers after 2000 (for example, Skogstrand 2011 in ARCH). The reason for the higher result for MASCULINE was not simply a case of male bias, but a specific focus on the masculine and as a response to a gap in the literature on men within the area of gender archaeology, and more broadly the identified need for inclusion of explicit focus on masculinity (e.g. Alberti 2006; Caesar 1999; Knapp 1998, Meskell 1999; Skogstrand 2011). At the same time that there is a small focus on masculinity, femininity is subsumed under the umbrella of either gender or women. FEMININE has the lowest count data for all keywords across the corpus. This is a major problem, as the cultural construction of femininity has material consequences and is key to gender theory. It would appear from the collocation results that there is a collective omission of the standard definition of gender, as the range of culturally constructed characteristics pertaining to, and differentiating between, masculinity and femininity. This absence of the feminine may also be attributed to what Skogstrand (2011) (amongst others) has pointed out as an apparent confusion of political/radical feminism with feminist theory, and an aversion to employing anything 'feminist', extending even to use of the word FEMININE. While many authors writing on gender do define their research as feminist (e.g. Conkey 2003; Engelstad 2007; Geller 2009; Spencer-Wood 2011; Voss 2000), the data proves the vast majority of archaeologists avoid using the term (along with feminism, hegemonic

femininity, feminine etc.). Engelstad (2007:226) believes that some authors fear being controversial and political, and thus marginalised, if they identify as feminists, in addition to those who simply reject the concept of feminism altogether. Perhaps for many authors, using GENDER as a blanket term for women, female, and feminine is more benign.

In terms of the research questions:

- how are the theoretical and analytical insights from feminisms used within archaeological research?
- have these insights been adapted to the archaeological discipline, and have they been developed and deepened?

It can be seen from the results that an adequate conceptualisation of hegemonic femininity and masculinity has not yet been developed across archaeology. The absence of these terms suggests that they are not topics considered relevant or important in the vast majority of research papers. It is also possible that, the absence of a standard definition of gender across the discipline, as well as the absence of content on gender, women, female, and woman, stems from an overwhelming rejection of these concepts as meaningful factors in most archaeological research. Further, there is a persistent and endemic lack of content on female subjects across all journals, highlighted by the lack of frequency and the content of concordance lines in the data.

So, what are people writing about gender, if not masculinity and femininity? There is a reoccurring, statistically significant collocational bond between the nouns *gender* and *archaeology* in the corpus. This means that when gender is used in any of the journals, there is a higher than random chance there will be an archaeological theory-related term or discussion in proximity. GENDER was most often used as a noun and a modifying noun, with most articles using it in a discussion of the theory of gender in archaeology. Gender is also repeatedly placed alongside words such as *research, theory, archaeologies,* and *study*. These relationships suggest that, within archaeology, the concept of gender has

been re-defined: *gender archaeology* is more than a descriptive label, it is a semantic preference, and is found as part of a discourse linking gender to the discipline, and has become part of its meaning. As such, it is intrinsically (but implicitly) associated with feminism and political reforms.

Sinclair (2004) discusses the concept of a single unit of meaning, whereby words in collocations used together have an evaluative or emotive implication, beyond what is expressed by either unit, but recoverable from the observation of the context. This pattern is clear across the corpus, and suggests that the sentence structures *gender archaeology/gender studies*, or *the archaeologies of gender* construe the noun to mean that gender is a theoretical platform, or sub discipline, not unlike the ways which 'historical archaeology' or 'Roman archaeology' are used together to from one category of meaning. The results thus demonstrate that 'gender' is understood to mean an area of speciality within archaeology, rather than a human process affecting materiality applied across archaeological studies. Within this pattern, gender is also used as a form of categorisation for types of research, rather than a process or causation of results in data. This use of gender is unique and is highly specific to archaeology. From this it is also possible to conclude that when gender is used in this manner, it does ideological work by establishing an epistemology. It has also been attributed a particular quality (both positive and negative). This trend, of using gender and archaeology as one unit, is visible over time in the collocation data across all journals, and in effect answers the research question:

- has the concept of gender in archaeology changed over time?

The answer is a clear yes. Gender, when used, occurs mostly as 'gender archaeology' and has come to mean a specialised area of study in the discipline.

In making explicit the specific way in which the language of archaeology has evolved to understand gender as an area of study, rather that the state of being male or female, it is possible to understand why there are peaks and then troughs in frequency and

content (thus publication) over time, especially after 2000. This 'redefinition' of gender within archaeology means that 'gender archaeology' is a sometimes applied area of specialisation and a topic that can be on or off trend. This also positions gender theory (like feminism) as an outsider concept. As a result, specific questions about gender as part of social relations are omitted in most research papers. The specific use of gender as a label also accounts for the stasis in content, whereby the same definitions and concepts are repeated and reiterated over and over (see critique by Geller 2016). When gender archaeology is included as part of background literature reviews the same concepts are recycled, rather than incorporated as key aspect of contemporary archaeological thinking or research designs.

It is also worth highlighting that there was no marked difference or increased use of the keywords or more nuanced interpretations across the corpus from *Historical Archaeology*. In this journal 'gender archaeology' is used as a unit in the same way as all other journals**.** This is despite the assumption that archaeology of the more recent past can potentially provide more detailed social perspectives on gender as aided by textual, pictorial and other evidence. In HA, gender is often left to a few sentences, and is usually mentioned superficially in combination with other categories such as class and ethnicity**.** All concordance lines from all articles containing the word GENDER in HA from 1986 to 1996 (the peak decade for frequency results) amount to 450 lines, and, of these, around 140 (30%) used gender alongside class, ethnicity, race, or status (or all of these) (see Appendix 8). In many cases an article defines gender as an important factor in archaeological research, but will then erase gender from the subsequent discussion. Thus, the author is clearly aware of the relevance of it to the story they are telling; yet chooses to ignore it in writing the detail of that story. Further, when concepts such as race or ethnicity and gender are used together in a sentence, this is rarely in the context of Crenshaw's (1991) intersectionality or other meaningful theoretical applications, but rather, as a superficial 'surface' discussion of 'social' factors (but for exceptions see papers in HA volume 31, 1997, such as Franklin 31 (3) and Rotman and Nassaney 31(2)). In viewing the concordance lines in Appendix 8 as a set, the papers that do consider

gender in depth have reoccurring passages on gender roles, ideology, relations, systems and equality. What is most obvious in HA (and across all journals), however, is that most papers consider gender only at a superficial level. A small minority in the corpus use and develop gender theory. This leads to the inescapable conclusion that there has been no 'deepening' of gender theory within the genre of research articles.

8.3 Attribution

> "We do not see that a feminist approach to archaeology is dependent upon some sort of methodological breakthrough that will suddenly render women (and even men) "archaeologically visible". Being able to "assign" certain activities or material culture to males and/or females is not the goal; it is not an end nor is it the means. We will try to show why gender attribution is not even a necessary stage in the process whereby we engender the past, although it is certainly and inextricably part of the inquiry. While it would be extremely helpful to attribute specific features to a specific gender, and while gender associations are integral to research that takes gender as a subject, we refuse to feel limited by the notion that we must provide gender attributions and must do so with a certain "fixity"." (Conkey and Gero 1991:11)

In Chapter 3.5, presence-absence discourses were explored in terms of gender attribution in the archaeological record, and particularly in terms of artefacts. Surprisingly, yet completely congruously, the issue of presence-absence discourses and gender attribution emerged as one of the principal themes across the collocation and concordance results. In examining what is 'present' in the data over time and across journals, various forms of *gender attribution* are manifest, and persistent. As indicated by the quote by Conkey and Gero (1991) above, feminist archaeologists have challenged (repeatedly) the limitations of gender "attribution", whereby gender ideologies/roles/tasks are uncritically attached to specific types of material culture, historically following binary stereotypes of males and females vis-à-vis a sexual division of labour. One of the key research questions of this thesis was:

- Has the writing of the discipline changed to include more inclusive, balanced accounts of both women and men of the past, with gender theory permeating discourses?

Despite arguments over the need to disentangle gender from 'things' and even bodies, and that gender is not something 'there' to be found (see Chapters Two and Three), the collocation data reveals a majority of the content on gender in the corpus is related to some form of attribution, and usually ascribed to women. There is a lack of balance, but this is due to a multifaceted feature of the results: the relatively high frequency of the keyword WOMEN in the corpus. After the keywords PEOPLE (1000 pmw) and HUMAN (678 pmw), WOMEN had the next highest average score across all journals, at 451 per million words. What is important to consider is this result of in light of the average 261 pmw score for GENDER, 272 pmw for MAN and 272 pmw for MEN. The similar rates of use for GENDER, MEN and MAN, suggest that GENDER is used as the opposite of men, or as a replacement term for women. There is thus a false dichotomy in operation: gender is used as the opposite of man, male or men. But WOMEN is *never* used as the default term for generic humans or people. Gender is very rarely ascribed to men in the corpus, and does not appear as a significant collocation with MEN, MALE or MAN in any journal. Thus, women are separated out as a subject matter, but *not* a case of women being the primary subjects of archaeological investigation. Instead, women are explicitly mentioned as research subjects due to an inherent back grounding of men, but the invisibility that men experience signifies not an absence or a 'weak presence' (as in the case of women), but a 'strong presence', in that invisibility emanates from the transparency that accompanies 'the norm'. Men are frequently at the centre of discourse, but they are rarely the focus of interrogation.

The high pmw count for WOMEN is accounted for in the collocation data as a direct result of discussion on female archaeological practitioners and issues of inequity and bias in the discipline. The clusters of similarly themed words that emerged from collocates of WOMEN were grouped in the same way as those for MEN, but with the addition of the category of 'discipline'. Like GENDER, WOMEN was used to denote a theme or sub-disciplinary topic, such as in '*women* in *archaeology*' or '*archaeology* of *women*' and '*women* in *prehistory*'. For example, the JAMT has a focus on the application of gender theory to women, and in AAA the highest MI score for women occurred with *feminist*.

Interestingly, AAA also shows that there is a relationship between the decreasing rates of use for WOMEN and GENDER, as from 2009 to 2013 the rates of decline are almost identical.

In Chapter Six the collocation results were tabled then grouped into categories adapted from van Leeuwen (1996). Differences between the attribution of roles and the context of use of MALE and FEMALE, MEN and WOMEN and MAN and WOMAN become apparent through the further clustering of the collocates. Words around the body and reproduction, such as fertility and infanticide, were consistently present alongside FEMALE, but not MALE. This trend is most pertinent in AA, but occurs in all journals. FEMALE is used overall more in terms of art, symbolism and iconography and there is more focus on female deities, figures and images than male ones. This is likely a result of women/female figures being identifiable by physical characteristics such as breasts, and specific motifs.

The concordance lines show some overlap of the themes of female representation, the body and relationships. For example, familial and kinship roles determine fertility or status, or ritual or symbolic practice, or vice versa. There are also differences in collocations that fall into the group of 'relational' identification: FEMALE is associated with the theme of kinship, sociality or community, and, in HA in particular, households. There were also observable distinctions in the adjectives and verbs used in the 'performance' category when attributing tasks by sex, whereby males are active, participate in labour and status activities, such as hunting, and females are discussed in terms of pottery, weaving, work, gathering and exchange. In contrast subjects around men included places and locations, and property and household ownership. Surprisingly, the words *space* and *spaces* occurred with MALE, but not with FEMALE. Both MALE and FEMALE are used in association with the words *kinship* and *community*, but MALE has additional words such as *teams* and *societies.* Occupational or status terms were also more often associated with MALE, as in, for example, male *students*, male *conscripts*, or male *chiefs.* Overall, there is little shift in the interpretation of women outside binary

gender roles, or in the relation of women to men. Men still have agency, while women still lack it.

Significantly, MEN is the keyword to have the most racialised collocations associated with it. There is a clear semantic preference for MEN to be used in relation to a range of racial or ethnic identifiers. This type of attribution has two distinct meanings within archaeology. The first is the way human remains are labelled, such as 'Kennewick Man', or cultural groups, such as Aztec men, as well as in terms of biological or DNA markers. The second meaning relates to a legacy of discursive processes used to communicate and ascribe identity. While women in more recent years have also described by race or ethnicity, men are, and always have been more likely to be described in this way. While racism in archaeology is not the focus of this study, it is certainly indicative of a trend, particularly in North American journals, to demarcate non-white males, and is a key finding in the results.

One of the aims of this study was to assess whether there was change over time in the use of 'gender' in terms of biological sex and physical markers of male and female (biological essentialism). It is important to gauge whether archaeologists have made efforts to understand broader social theory about the differences between sex and gender. In contrast to the results for GENDER, the use of SEX has increased incrementally over the time period examined, but also with several peaks occurring in its use. The overall frequency for the word is less than that for GENDER, but SEX is used more often and in more issues. So, while GENDER has a higher number (attributed to more peaks caused by special issues or articles), SEX is used more often overall. In terms of collocation, SEX most often occurred with the words 'age' and 'ratio'. This exemplifies that SEX is used by and large to denote biological sex or as a data variable, such as in the identification of human remains in burials.

Content on sex acts, behaviours, sexuality and sexualities is largely absent. Though not explicitly studied in this thesis, there is a small but growing increase in queer archaeology

post 2010 (see, for example, Blackmore, 2011 in ARCH, and a special issue of JAMT in 2016). In terms of the relationship between sex and gender, gender has not superseded or become a substitute for the use of the word sex, but 'sex' and 'gender' do occur at the same time, with multiple and overlapping uses. Contrary to the hypothesis that many papers would use sex and gender interchangeably, the majority used sex only to complete biologically-cued sentences. Where the differences between sex and gender become murky is where gender is used as a synonym for sex, and when gender is linked back to the male/female dichotomy. Collocation trends indicate a variety of understandings and beliefs about gender that range from misuse of 'gender' as 'sex', to papers that associate gender with females and discrimination/inequity issues.

Simple attribution of 'female' to bodies or things, and women discussed as explicit subjects in articles is symptomatic of the slow change from 'male' as the standard or normal human in archaeology. There is recognition of the ontological concern that what archaeologists recognise as data, and what is conferred evidentiary significance, are necessarily functions of the 'pre understandings' employed (Hodder 1999). Overall it can be seen that gender is also used as an umbrella term for women (and vice-versa) or for anything to do with the female. The tokenistic inclusion of female/woman/women masks the need for deeper disciplinary transformation.

8.4 Ambivalence

This study aimed to ascertain if gender has permeated journals, if publication has diminished, or if gender has simply been routinely incorporated into archaeological theory and practice. Taking as a whole the diachronic corpus of journals, the collocation data are characterised by ambivalence and a lack of interest in gender, combined with a continuing male bias. This ambivalence is quantifiable in different ways – the tendency for males to be used as the default human, the minimal use of the term 'women' beyond a simple inclusion in a binomial pair, and for males to be mentioned first ('male firstness'). Perhaps most concerning is the continued absence of content on women as standalone subjects of archaeological investigation, as opposed to being at the core of

content. Thus, in the absence of specific information about gender, social categories appear to be implicitly represented as male far more often than they are implicitly represented as female. This is evidence of ongoing and systemic gender bias in the discipline. The change evident in the corpus over time to the use of HUMAN instead of MAN is encouraging, in that it suggests a gain for sexual equality at least in terms of linguistic representation, but the attribution of GENDER to WOMEN indicates that there is still a long way to go.

The collocation tables in Chapter Six and Appendices 2 to 8 also provide evidence of several important trends: the linking of gender to women, the strong and consistent use of gender binary terms men and women, male and female, man and woman as binomial pairs, and the use of men, women and children and women and children as one syntactic unit. Although such tokenistic inclusion in itself can appear unproblematic, it may fall into a potential pitfall of reinforcing essentialist ideas on gender and enlarging stereotypical gender roles. From the 1990s the keyword WOMEN increases in frequency, along with GENDER, though it is apparent in the concordance lines that WOMEN is also often tagged on after MEN for the sake of inclusiveness, as a binomial pair through to 2013. The 'and gender' or 'and women' phenomenon is more persistent into the present, where gender or women are added as variables or placed as an afterthought or caveat to an analysis. It seems that, since 2000, both male and female archaeologists have excused themselves from the intellectual responsibility to know when and how gender is relevant to their work, or to identify more than a one or two feminist authors (usually Conkey and Spector 1994).

Ambivalence (or a lack of interest in a subject) is clear in results for both CHILDREN and FAMILY. The absence of content on CHILDREN was persistent across the corpus. When CHILDREN is present the term is often linked to women or used in the phrase 'men, women and children'. Children are often inappropriately allocated to an adult male/female gender, usually to the "women and children" group. As pointed out by Baxter (2005), children are often regarded as a presumed burden that prevents

women's engagement in other activities. Motherhood is also a culturally constructed category, as is child, and child rearing duties differ significantly between cultures. The lack of directed study on childhood and gender seems to be a result of a consensus view that identifying them archaeologically is impossible or that they are unproductive and dependent, and therefore do not produce distinctive archaeological signatures (but see Baker 1997; Baxter 2005; Deverenski 1997; Moore and Scott 1997). Perhaps it is also linked to the fact that many archaeologists have not been interested in children as a subject for serious research, or even see children as a separate category to women. This is evidenced by the word CHILDREN occurring most frequently with WOMEN, and thus the two are seen as one syntactic unit (a noun phrase) and play the same semantic role in the text. The analysis of frequencies can provide information about the sorts of concepts that are privileged or silent in archaeology, and the results demonstrate the subject of CHILDREN is a marginal topic.

FAMILY is an important concept in the study, as it was thought to indicate discussions around household composition, the life course, gender, class, race, power and generational relations, kinship, sexuality and varied forms of domesticity. However, in examining the collocations, issues of property, status, class and households dominated research themes. There was little direct discussion around gendered themes, nor was gender theory often applied to studies on the family. Overall in the corpus FAMILY was not linked to explicit gender theory, but rather to implicit conceptions of the gender makeup or constitution of family groups, their size and structure, and as a unit of production.

In considering the research question:

- if there is a decline in publication, then why?

It is important to consider trends both inside and outside archaeology. As intimated by Joyce (2002:5), the decision about what types of stories are told and those discarded likely occurs at the fieldwork stage. Arguably the decision to include or discard gender theory is likely to have been formulated prior to the writing of a paper, and possibly in the field or at the beginning of the research. The absence of 'gendered thinking' about

the archaeological record may also be in part a result of a lack of familiarity or exposure to gender theory or research tradition: archaeologists do not write (or presumably, think) about gender because gender is not a commonly published subject; at the same time there is a lack of content in eminent journals, which perpetuates the tendency for many archaeologists to not write (or presumably, think) about gender.

The results thus demonstrate a displacement of gender discourses in favour of others, filtered through an editorial process that renders them more acceptable for publication. At the same time that there is an absence of discussion on gender and it is omitted from text, there are other theories being promoted, accepted, reproduced and cited. If readers of highly ranked journals do not notice gender because it is not there, it is difficult to raise questions about it, cite theories about it, reuse and apply it.

The absence of gender in the corpus could also be seen a result of a presumption by authors that gender that is a given, or implicit, in any discussion of human culture. Presupposed absences are not always benign, as they can convey meanings and beliefs about gender that perpetuate stereotypes and biases. There is also somewhat of a 'catch-22' situation in effect: if binary gender is assumed to be a constant, and because archaeologists publish very few examples of gender-informed work, the assumption that binary gender is a constant goes unchallenged. In fact, the static nature of gender-informed work is perhaps continued in the widespread use of 'gender archaeology' as one syntactic unit. In either case it is arguable that there is always some form of intentionality involved, since the inclusion of accepted, scientific themes ('hard facts') and the omission of conceptual ideas ('soft ideas' i.e. gender theory) visible across the corpus cannot reasonably be ascribed to chance.

The results show that much of the work conducted on gender throughout the 1990s was undertaken with a political, often feminist, motivation (shown by collocated words such as feminism). Since that time there has been an apparent loss of political motivation, apathy or distancing from feminism, and ambivalence towards gender theories in

archaeology. There is a shift from a focus on gender towards queer studies, which can be seen as filling the 'space' dedicated to 'social' issues in the journals. At the same time, in many developed societies today, there appears a general inability or reluctance to recognise "patriarchy"–the systemic gendering of privilege and inequality–as existing in one's community or as personally relevant. Several kinds of disavowal are evident. The first is generational, and particularly prevalent in contemporary popular culture and media discourses, which suggest that we are now living in a "postfeminist" era in which sexism and feminism are passé. Postfeminist media representations are purportedly gender-equal or pro-women in depicting young women as visible and active in the public sphere, and as powerful in all kinds of situations (Gill 2003; Lazar 2006), and so question the relevance of a feminist critique of sexism today. Along with generational distancing, there is a second kind of disavowal based on geographical or cultural 'othering'. Where sexism and patriarchy are acknowledged, these are seen to apply in contexts elsewhere and not one's own (for example, a growth in the theme of gender in development/developing countries).

This data in the corpus can be complemented by a comparison with the data on the number of searches for 'gender' and 'archaeology' in Google. This is an interesting contrast because the search captures a different cohort, 'searchers' are not just archaeologists or academic authors, but the general public. The data indicates broader interest in the subject in recent years. *Google Trends* (the search engine provider), has made data from 2004 publicly available and is, in effect, a corpus. This facility can show how often a particular search-term is entered relative to the total search-volume across various regions of the world, and in various languages. Numbers in the graphs represent the search interest relative to the highest point on the chart for that topic in the given region and time, so the results are not in relation to every search in Google. A value of 100 is the peak popularity for the term. A value of 50 means that the term is becoming half as popular. Likewise, a score of 0 means the term was less than 1% as popular as at its peak. The search terms can, however, be compared to one another.

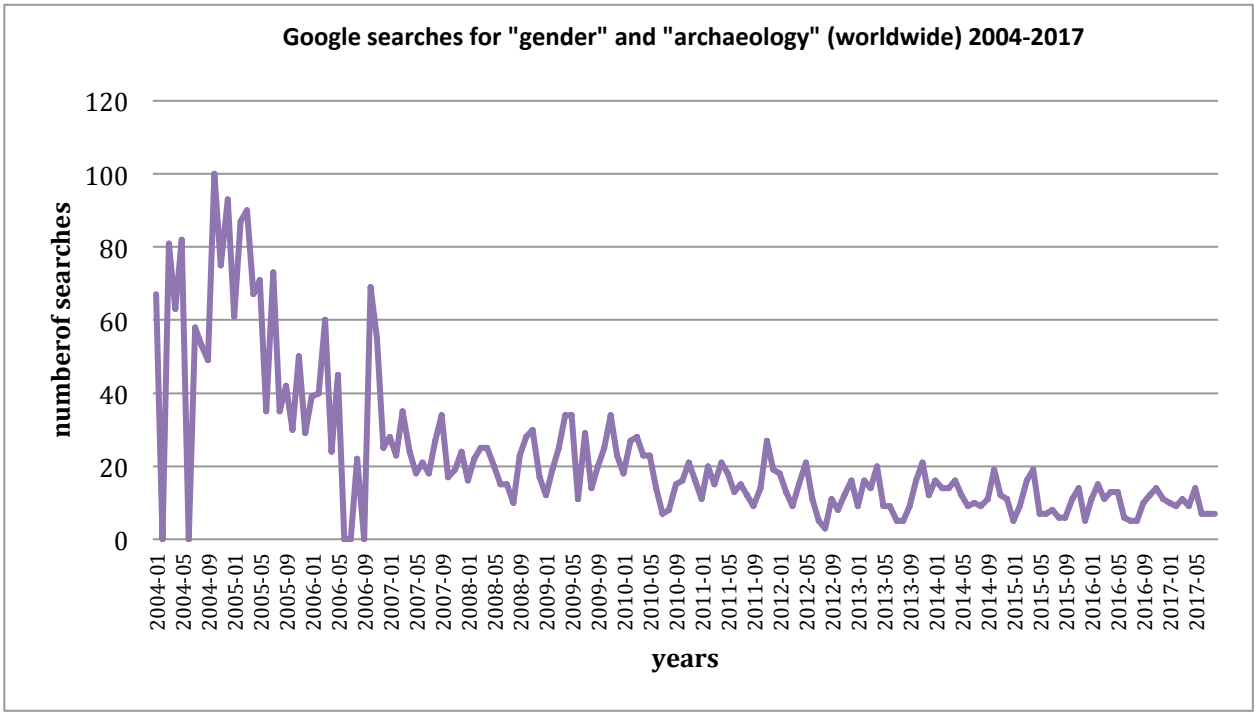

Figure 76: Results of *Google trends* data for "gender" and "archaeology" 2004 to 2017

The *Google Trends* database was searched for "gender" "archaeology" compared to "archaeology". The result for "gender" "archaeology" is less than 1% of "archaeology", and the graphs flat line as all values are zero. In other words, from 2004 to 2018, less than one per cent of all archaeology searches were for gender *and* archaeology. The results for feminist *and* archaeology are identical. Figure 76 shows that searches for "gender" and "archaeology" have declined since 2004, a result that mirrors the corpus linguistics data. This graph shows that the peak search was in early 2005, with a steady decline after 2006. It is difficult to say whether the decline is a result of the decline in publication, or if the decline in publication is a result of a widespread declining interest in the subject. Either way, there is a problem. While gender does not have a place in all articles, nor should it be a concern in all investigations, it is still surprising that after years of advocacy there is ambivalence in, if not disinterest to, incorporating gender into archaeological research and practice.

8.5 A procrustean bed?

Figure 77: Theseus fighting Prokrustes. Surround of the tondo of an Attic red-figured kylix, ca. 440-430 BC. Said to be from Vulci. Image reproduced under the Creative Commons Attribution 2.5 Generic license.

> Procrustes kept a house by the side of the road where he offered hospitality to passing strangers, who were invited in for a meal and a night's rest in his very special bed. Procrustes described it as having the unique property that its length exactly matched whomsoever lay down upon it. What Procrustes did not volunteer was the method by which this "one-size-fits-all" was achieved, namely as soon as the guest lay down Procrustes went to work upon him, stretching him on the rack if he was too short for the bed, and chopping off his legs if he was too long. Theseus turned the tables on Procrustes, fatally adjusting him to fit his own bed.

A 'Procrustean bed' is visible in the results of this thesis: it is the disciplinary culture of archaeology, as well as requirements for publishing in peer-reviewed archaeological journals. There is a scenario that exists whereby readers do not see gender discourses

permeating archaeological journals and therefore do not submit such papers for consideration as they believe they may fall outside the types of articles that 'get' published (their legs might be chopped off by Procrustes, so why risk it?). When papers are submitted for publication there is a rhetorical demand to demonstrate new findings, but within an adherence to disciplinary norms. Thus, in archaeology, where males have 'traditionally' been taken as the norm for the interpretation of human culture, data about females may be 'new' or 'additional'; the inclusion of an overt discussion on gender might be seen as 'risky' or 'untested'; data about males may be presupposed, 'given' information (Clark and Haviland 1977). The results in this thesis show little inclusion of gender theories and studies in the corpus. This does not necessarily mean that individual editors or editorial teams are to blame (they have their own Procrustean bed to lie in), rather, there is a more dispersed form of bias and intentionality, one that includes not only particular journals, but also the larger disciplinary context and norms that impinge on it.

While gender theories are still present in all of the works that have been discussed in Section One, they are explicit and uncommon in the corpus. Advocates for gender theories in archaeology, such as Conkey and Spector (1984), and all those who have followed, continue to resist (like Theseus) because their efforts do not appear to be transformative to date. There is thus a need to continue to go 'beyond' simply 'adding' discussions of women and women's experiences into our discipline, to encompass the broader task of interrogating and transforming existing conceptual schema.

Taking the results as a whole, it is argued that discourse, as a process of signification, functions to structure systems of presence and absence within the discipline, such that certain concepts are organised into everyday practices, while others are organised out. In the literature on discourse analysis, there is acknowledgement that communication involves more than just the linguistic markers used to encode it – that often what is not said or written can be as important, if not more so, than what is (Fairclough 1992; Huckin 2002; Van Dijk 1998). In analysing the results of this thesis it is thus important to also

consider not just the 'peaks', but also the 'troughs'; it is the troughs that highlight the missing gender discourses in the corpus. From an archaeological perspective the structure of this ideological 'system' is not arbitrary, but rather reflects a contest between different interest groups or individuals to create a discourse in which certain views (or techniques or theories) are privileged over others. The dominant group (or coalition of groups) therefore is able to create an ideological meaning system which then serves its own interests (Simpson and Lewis 2005: 1265). In this way, power is institutionalised and hence constitutive of normal, routine, academic practices, a position evident in Foucault's conception of the relationship between power and knowledge (Foucault 1979: 27-8). Subject, theme and language choices all indicate judgements by authors and editors of what is acceptable and unacceptable content in research articles. Foregrounding and privileging some interpretations, sites or projects, silences others as unsuitable, marginal or of little impact. In this context, the unexpressed/unpublished (on gender) can be seen to constitute text as absence. Foucault (1976) suggests absence constitutes discourse, and can be an agent of power in its own right. Gender 'absence' is the result of power being articulated, and can be seen in the way prevailing normative rules—and, for example, women as subjects—appear as contradictions, disruptions or silences.

Studying gender relations of power through language and discourse elucidates how oppressions can be inherent in the discipline through all-pervasive norms embedded within discourses. The results stand in contrast to some of the commentary around the content of gender in archaeology. While Fesler (2004:179) claimed almost two decades ago that "the shelves of most libraries are bending under the weight of anthropological and archaeological books, articles, and journals devoted to the study of gender", the results do not support such generalisations. In fact, they demonstrate quite the opposite: that gender theories are absent in the vast majority of the 4784 articles analysed.

8.6 What is the impact of gender archaeology?

Three key findings emerge from this thesis. First: frequency and content. There are fewer people actually doing 'gender' archaeology now than in the 1990s. This was the 'peak' for publication on gender theory in the six journals considered. The content across all six journals shows that gender and its related words appeared negligibly before 1990 and that since 2000 there has been a steady decline in content. From this data it is clear that it *cannot* be claimed that, because there are more women in archaeology now than in the past (Bowman and Ulm 2016), there is more interest in gender and/or writing on gender. At the start of this thesis it was hypothesised that gender theory may have simply been incorporated into archaeological theory and practice, i.e. become an integral part of publications on social archaeology. This is not the case. There is little inclusion of gender theories or related subjects in the vast majority of the 4874 articles analysed. That is not to say that gender theories have not been used, developed and advocated, but that these are papers are by a small sample of people who spend time focused on the topic of gender and are therefore invested in publishing their viewpoints. There is no marked change in the landscape of publishing. It is arguable whether or not there has been an impact, if so, it is certainly marginal and inconsistent, not permeating overarching archaeological discourses. It is also evident that some researchers think more consistently about the language of sex and gender, as evidenced by the 'peaks' in the use of gender-related words. However, there are many more who do not.

The concept of gender in archaeology has, however, changed over time. It was expected that across the corpus there would be a change to gender-neutral terms. This is confirmed in the data by the consistent increase in use of the words HUMAN and PEOPLE, and a decline in MAN (used in this context). This indicates an effort to change sexist language across all journals. This, however, masks the processes that maintain men as the default means of representing humans. The hypothesis that, although the use of the generic 'man' would no longer be visible in the archaeological literature from the 1990s, an androcentric tendency to explain gender difference findings as being

about women rather than men would still be evident from the 1960s until the present is confirmed. The issues of women's identity, participation and empowerment have not changed over time.

The change to a re-definition of gender to 'gender archaeology' is, in contrast, unexpected. The collocation data show that since the mid-1990s 'gender' has evolved in use in a statistically significant, re-occurring pattern alongside 'archaeology'. There is a widespread sematic preference for this collocation, and, as such, a norm in research in its function as a noun determining another noun. This pattern is corpus-wide, (and world wide) and suggests that the sentence structures *gender archaeology/gender studies*, or *the archaeologies of gender* construe the noun to mean that gender is a theoretical platform or sub discipline. As 'gender' has come to mean an area of speciality within archaeology rather than a human process affecting materiality, it has also established a new epistemology: 'Gender Archaeology', as a label, or a 'thing'. Further, 'gender archaeology' has evolved in the discipline to be used as a means of addressing or muting *anything* to do with women in archaeology.

Second: sexism. There is no evidence that language use has become less sexist or more inclusive in terms of gender representation over time. Sexism is an ugly word, but it is apparent that, while institutional laws, rules and goals may have changed behaviours, the underlying cause of gender inequity (both in the workplace and in our interpretations of the past), remains. It is the attitudes, values and the internalised mindset that every archaeologist has about gender, what gender is, did in the past, and still does, rather than the externalised rules that shape and deliver true gender equity. There is a kind of obliviousness to 'hegemonic masculinity' evident in the corpus. There is a clear preference for men as actors and agents, although they are almost always 'genderless'. In contrast women are interchangeable with the word gender, as if gender is a peculiar quality that only women possess.

Third: the tokenism of binomial pairs. There is common and uncritical use of men and women (and related terms) as binomial pairs, usually with males placed first. While the words masculine and feminine were palpably absent from the corpus, the syntactic units 'men and women', 'male and female', 'man and woman', and 'women and children' were prevalent. This preference is important for a number of reasons. Evidence about the frequencies of other binomial pairs suggests that the more powerful identities tend to come first. For example, it is more common to see the orderings of parent and child, master and slave (Baker 2014:93). Additionally, preferable states also come first: good and bad, happy and sad, rich and poor. In terms of binomial pairs it could be argued that people are primed to consider the first element of the pair as being preferred or more important, due to their prior experience with language use, and that the opposite is somehow incorrect or sounds unnatural. The data indicates a surprisingly high amount of 'male firstness' across all journals. On the other hand, while the frequency of women increased substantially after 1990, the frequency of men barely shifted over time. However, as mentions of women grew over the 1990s it seems that they ("women") became more likely to be tagged on as an afterthought to men. The inclusion in many instances is tokenistic, perhaps as a way of including 'gender' or women into papers. The analysis of collocated verbs transmits the image of women as actors in a limited world.

Limitations of the study

Although the methods of corpus linguistics generate quantitative data, both the methods and analysis are still heavily reliant on the objectivity and judgment of the individual researcher and a degree of manual analysis and the perception of patterns. Another limitation is the notion that just because a word occurs frequently, this does not necessarily mean it is semantically central to the text's meaning. For example, WOMEN may occur at a frequency of 100 pmw, but unless the context of the word is also examined (using collocated words or concordance lines) it may be that WOMEN is associated with the word BAD. As such, findings are more likely to be reliable and valid if shown to occur across a large dataset and collocations must be used in conjunction

with frequency data. This guards against 'cherry-picking' or intentionally selecting (possibly atypical) data or linguistic features for analysis to prove a preconceived point.

No citation analysis has occurred in conjunction with the critical discourse analysis. An author's sex was not considered to be a major factor in the analysis of the impact of gender in the discipline. The presumption that women intrinsically write differently to men also risks reifying stereotypes. There have also been many studies that have already considered the author's sex and bias in publishing trends (for example, Bardolph 2011; Burke and Smith 2009). A useful study in future may be to compare what papers on gender are cited, following Hutson (2002). A major limitation was the language of the corpus: English. While a nuanced interpretation of journal data in another language(s) is not possible, it would prove useful to be able to compare trends across non-English language journals to see if the trends were similar or different.

This analysis has shown the collocates are better scrutinised along the axis of identification, performance, attribution and the discipline, rather than as individual words. Along these axes there is a perceptible degree of homogenisation across journals, as all genres are characterised by an increase in the use of identifying processes and identity issues throughout time. These groupings aid in examining the stereotyping of women in particular, the elements which identify them and also the activities they are doing.

The six decades covered in this thesis are a mirror of the historical events that have motivated and accompanied work on gender. The chapter highlights the pervasive gender biases and assumptions in the epistemologies of archaeology, elucidating where change has occurred, and where silences remain. In terms of conceptual efficacy, this study has shown that the change in approaches throughout the decades entails a range of transformations, but that 'gender' remains 'problematic', not only because of the difficulty in translating and interpreting a complex and often subtle social process in material culture, but also because it is hard to put into practice, especially in terms of

the Procrustean bed that is the requirements for academic publication of research. Despite the contributions of many individuals who have laid the foundations for a research tradition in the area of gender, archaeology has not yet come to grips with the notion of gender as a critical component of any social analysis.

CONCLUSION

This thesis is concerned with gender in archaeology. But, to a greater extent, it is really about prising apart the ongoing, more insidious and entrenched structural manifestations of gender bias in archaeological discourse and practice. It examines how gender exists and impacts archaeology —how it has come to be studied, compared, understood, discussed, and applied. It holds a 'mirror' to disciplinary culture, to see problems and solicit change. It is hoped the insights gained from the study promote a more self-conscious discipline, and reinvigorate the scholarship on gender in archaeology.

In Section One of this thesis, I provide a historiography of gender theory, from both inside and outside the archaeological discipline. I believe a theoretical heritage needed to be coherent and detailed in a way which deepens the understanding of how gender theory has been applied in the past, in order to gauge the future trajectories it make take. An exploration of the major research ideas and exponents clarifies how and why gender is important, and what gender does, and enacts, as a form of praxis. It is imperative to the research process, also because this study comes at a time when patriarchal attitudes towards women are particularly resurgent. In 2017 in Australia, a wave of anti-gender theory rhetoric was triggered by the same-sex marriage debate. The push to return to biological essentialism from some sectors of the community was tangible and confronting. With this thesis, I aim to, at the very least, resist the rhetoric of 'post feminism' by once again demonstrating both the centrality of gender theory to human identity and to studies of men and women of the past. I also aim to highlight the deep-rooted misogyny in the academy as exhibited through practice, structure, and performance of the English language. The framework of this study is developed from the legacy of gender and feminist studies in archaeology, and is influenced by the early work

in the area. The analysis and methods used are original and contribute new knowledge to the study of how the discipline has engaged with gender theories.

In Section Two, I have linked of gender, language and archaeology. In doing so, I have been able to unpick and interrogate whether the concepts of gender have permeated mainstream theory and method, or reduced to merely an area of specialisation or sometimes-applied category of analysis. The diachronic exploration of texts from six major archaeology journals traces the representation of gender and its associated words throughout six decades, from 1947 to 2013. The goal was to establish the degree to which gender was reflected in these texts, and thus gauge the impact of gender theories across the discipline. The tools of critical discourse analysis and corpus linguistics were combined and adapted to form an adequate methodology for data collection and the analysis of the content of the six journals, the corpus. More exactly, using the AntConcordance software, the journals were processed for keyword, collocation and concordance data, which I then scrutinised. This process was necessary because there was no established method available to test of measure the impact of a theory or discourse in the discipline.

In this thesis I have introduced and tested a replicable method to assess the extent to which concepts related to gender are embedded and imbricated within the research methods, themes and discussions in archaeological writing. This involved examining the content 4784 articles and is both a quantitative and qualitative study. By closely examining the numbers, and patterns of usage of words, it was possible to quantify the content of writing on gender as part of a large corpus of writing. This diachronic study of texts from the six journals has pointed to a serious absence of content on gender and its related concepts. Absence is another way of undermining the legitimacy of gender research, but it is disguised rather than coercive. Gender then becomes ignored because it is misinterpreted, unknowable, disappeared, inappropriate.

There is a persistent trend in the data indicating that gender has been found to be is irrelevant in most areas of archaeological study. There is a rejection feminist scholarship after 2000 (probably based on out-dated stereotypes and a failure to read contemporary research done by scholars in the area). The very real gains made in the 1990s by scholars working in gender in archaeology have to be balanced by a sober consideration that the data of the thesis that shows gender is still positioned outside the main business of archaeology.

Overall, this research has also shown that often, gender and also women are referred to only superficially in text. Though the word 'women' may appear in a text, it is not in the context of a discussion, but usually part of a binomial pair, the add 'men and women' tactic. Gender has become 'gender archaeology', and this is also an umbrella term for anything to do with women. Men and women often appear in discussions of human remains, and women are often identified though the attribution of artefacts. Men are still the default category of human, with women are singled out as subjects if something stands out as being particularly 'female'. There was a florescence of gender research that arose during the late 1980s and 1990s, but despite a number of edited volumes and books using gender theory in archaeology, and over four decades of academic debate about gender as a key social process, few methodological or theoretical applications of these are evident in the major peer-reviewed journals. If the years of solid and articulate arguments for changing how we think about and talk about gender have resulted in very small shifts, then the underlying hegemonic principles are still there and are stronger than ever.

Finally, with the above in mind, this material in this thesis can be used as a guide for planning future publications on gender. In fact, after in completing this investigation, I would urge researchers interested in generating better discussions about men and women in the past, and on gender, to publish in leading archaeology journals. It is critical to continue to advocate and grow the legacy of those who have worked hard for the cause of gender archaeology in the past. It is also possible (and necessary) to change the narratives on gender in archaeology into the future.

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