

The Inexorable Rise of Gender and the Decline of Sex: Social Change in Academic Titles, 1945–2001

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More than 30 million titles of “academic” articles, from the years 1945–2001, were surveyed for occurrences of the words *sex* and *gender*. At the beginning of this period, uses of *gender* were much rarer than uses of *sex*, and often used in the sense of a grammatical category. By the end of this period, uses of *gender* outnumbered uses of *sex* in the social sciences, arts, and humanities. Within the natural sciences, there was now more than 1 use of *gender* for every 2 uses of *sex*. The beginnings of this change in usage can be traced to Money’s introduction of the concept of “gender role” in 1955 (J. Money, 1955). However, the major expansion in the use of *gender* followed its adoption by feminists to distinguish the social and cultural aspects of differences between men and women (*gender*) from biological differences (*sex*). Since then, the use of *gender* has tended to expand to encompass the biological, and a *sex/gender* distinction is now only fitfully observed.

KEY WORDS: sex; gender; gender role; feminism.

INTRODUCTION

In *The Mill on the Floss*, the novelist George Eliot (Mary Ann Evans) (1860) wrote “Public opinion, in these cases, is always of the feminine gender—not the world, but the world’s wife . . .” As this literary example shows, the use of *gender* as a synonym for *sex* has a long pedigree and is not a recent aberration as is sometimes claimed. The *Oxford English Dictionary* quotes uses of *gender* for *sex* from the fifteenth century, although in the first edition of the Dictionary in 1899 this usage was described as jocular. From the 1950s, however, a trickle of nonjocular uses of *gender* began to appear in the academic literature and, by the 1980s, this trickle had become a flood.

The most important factor was the adoption of *gender* in the 1970s by feminist scholars as a way of distinguishing “socially constructed” aspects of male–female differences (*gender*) from “biologically determined” aspects (*sex*). This distinction is now only fitfully respected, and *gender* is often used as a simple synonym of *sex*. The rise of *gender* has been accompanied by complaints

that the word should refer only to grammatical categories (Fletcher, 1991; Goodhart, 1992; Smyth, 1968) or to socially but not biologically determined differences (Fishman, Wick, & Koenig, 1999; Kim & Nafziger, 2000; Lewine, 1994; Pearson, 1996; Walker & Cook, 1998; Wilson, 2000).

In an attempt to document these changes in usage, I surveyed the titles of over 30 million academic articles, from the years 1945–2001, for occurrences of the words *sex* and *gender*. This work extends a similar analysis by Haig (2000) for the period 1988–1999. The quantitative analysis is followed by a discussion of the shifts in meaning of *gender* over this period.

METHOD

The ISI Web of Science[®] is formed from the amalgamation of three databases: the Science Citation Index—Expanded (SCI) contains titles from 1945 until the present; the Social Sciences Citation Index (SSCI) contains titles from 1956 until the present; and the Arts & Humanities Citation Index (AHCI) contains titles from 1975 until the present. The contents of the three databases have considerable overlap. Thus, an article may be indexed in more

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than one database. The combined database contains over 30 million titles for the years 1945–2001.

The titles of all English-language articles in the Web of Science for the years 1945–2001 were searched for occurrences of “sex” and “gender.” Such searches retrieved titles that contain hyphenated constructs such as “sex-specific” or “gender-significant” but did not retrieve titles in which sex and gender appear as derived forms, such as “sexual” or “gendered.” In total, the searches found 59,262 sex-containing titles and 29,941 gender-containing titles (with some titles belonging to both categories).

The titles of articles in non-English languages often appear in the Web of Science as English translations. These articles were excluded from searches for “sex” and “gender,” but I was unable to exclude them from counts of the number of titles being searched. Therefore, whenever I calculated proportions of titles containing “sex” or “gender,” the numerator contained English language articles only, but the denominator contained articles in all languages. Most articles in the database are in English, but I do not have a measure of how the proportion of non-English articles has changed over time. This is a potentially confounding factor in the interpretation of Figs. 2–4. However, overall trends were little affected by including or excluding non-English language articles from searches.

Both sex and gender have uses for which the other would rarely, if ever, be substituted. Since the late 1970s, gender in its grammatical sense has contributed a small minority of all gender-containing titles. Of somewhat greater significance are biological uses of sex for which gender is not used (e.g., sex, in the sense of genetic recombination; sex chromosomes; sex hormones). But probably the most important uses of “sex” for which “gender” is not a synonym relate to copulation and other sexual activities (e.g., sex, in the sense of sexual intercourse; anal sex; safe sex; sex worker; sex slave). Such uses contribute a relatively small proportion of sex-containing titles in SCI, but a much greater proportion in SSCI and AHCI. (Analysis of a small sample suggests that about half of all sex-containing titles in SSCI and AHCI for the year 2001 belong in this category. I suspect that the advent of AIDS has increased the frequency of titles in this category, especially in SSCI, but I did not undertake a formal analysis.)

My analysis focused on usage in titles, but fashions in titles may not entirely reflect the content of articles. Articles may use gender in the text without it appearing in the title, or vice versa. In some cases, titles appeared to reflect editorial rather than authorial choices. For example, articles by Rothman and Liess (1976) and Harlap (1979) contained the first nongrammatical uses of gender in titles from the *New England Journal of Medicine* (with the en-

suaging correspondence, Harlap [1979] contributed six of 33 gender-containing titles in SCI for 1979). In both articles, however, gender appeared in the title but not in the text, where sex was used. Occasionally, tensions came to the surface. Ounsted and Taylor (1972) wrote in their edited volume, “As between the words ‘sex’ and ‘gender’ even, while preferring the scope of the latter term, we have accepted our authors’ preference for the former where they wish it” (p. vi). Despite this ecumenical principle, “gender” was used in the title of two chapters that used “sex” throughout the text, and the title of a third chapter contained “gender” in the Table of Contents but “sex” at the head of the chapter.

The journals indexed in the databases varied from year to year. Therefore, changes in the number of titles containing a particular word will depend only partly on changes in usage, but will also be influenced by what was and was not included in the database for a particular year. For example, several psychology journals that were covered by both SCI and SSCI in 1977 were no longer covered by SCI in 1978 (e.g., *Child Development*, *Journal of Personality and Social Psychology*). As a result, 28 SCI titles contained gender in 1977 but only nine contained gender in 1978. The latter figure would have been increased to 25 if titles, now included only in SSCI, had still been included in SCI. Thus, a corporate decision at the Institute for Scientific Information[®] accounted for most of the seemingly anomalous increase in the sex-to-gender ratio of SCI titles in 1978 (Fig. 1), although this factor does not explain the rebound to 33 SCI titles containing gender in 1979.

As another example of changes in coverage, the number of articles included in SSCI increased by 13% between 1994 and 1995. This increase appears to be due to the inclusion of additional journals not previously covered by SSCI. It is possible that the substantial increase in the proportion of titles containing gender that occurred in 1995 (Fig. 3), and the subsequent plateau in this measure, reflected a change in the composition of SSCI rather than any change of usage in the academic community; however, a 25% increase in the number of articles covered by SSCI between 1975 and 1976 does not appear to have affected the relative occurrence of sex and gender. An ideal analysis would separate effects of changes in usage from changes in coverage, but I doubt that such an analysis would change the gross trends detected by the present much simpler, and more easily replicable, analysis.

The databases did not contain book titles, except in book reviews, nor the texts of articles and books. Moreover, it is probable that use of gender in the titles of articles in indexed journals, at first, lagged behind conversational use. My quantitative analysis is restricted to indexed titles. The narrative that follows the quantitative analysis makes

use of other published sources that came to light in my readings.

RESULTS

Prior to the late 1960s, nongrammatical uses of gender were exceedingly rare. For the years 1945–1959, 1,685 (.14%) SCI titles out of 1,162,909 contained sex but only five (.0004%) contained gender. Of these, three used gender in a grammatical sense and two were sexological articles, both by Money (Money, 1955; Money, Hampson, & Hampson, 1957).

For the years 1960–1966, 2,094 (.17%) out of 1,253,631 titles in SCI contained sex and eight (.0006%) contained gender, of which three were grammatical uses and five were sexological (including three articles by Money and coauthors). For these same years, 819 (.24%) out of 353,069 titles in SSCI contained sex and 12 (.004%) contained gender (including four articles by Money and coauthors). Four gender-containing titles appeared in both SCI and SSCI.

Figure 1 presents changes in the ratio of sex-containing and gender-containing titles for the years 1966–2001

(from 1975 for AHCI). The ratio is expressed on a logarithmic scale because this is unbiased with respect to whether sex or gender appears in the denominator (i.e., 1:2 and 2:1 ratios are represented as equidistant from 1:1). There was substantial noise in the signal for the early years of this series because of the small number of gender-containing titles.

Some general observations can be made. The sex-to-gender ratio has always been lower in SSCI than in SCI, but this became more pronounced after 1973 when the SSCI initiated a sustained decline in the sex-to-gender ratio, which then leveled off in the 1990s (by which time gender-containing titles outnumbered sex-containing titles). A similar decline in the sex-to-gender ratio for SCI titles did not start until about 1980 and is still continuing. The ratio for AHCI followed closely that of SSCI, but with a slightly stronger preference for gender over sex. The first year for which gender-containing titles exceeded sex-containing titles was 1987 for AHCI and 1990 for SSCI. Sex-containing titles have always outnumbered gender-containing titles in SCI.

In 1993, the United States Food and Drug Administration (FDA) issued a Guideline requiring studies of “gender differences” in all new drug applications (Kessler,

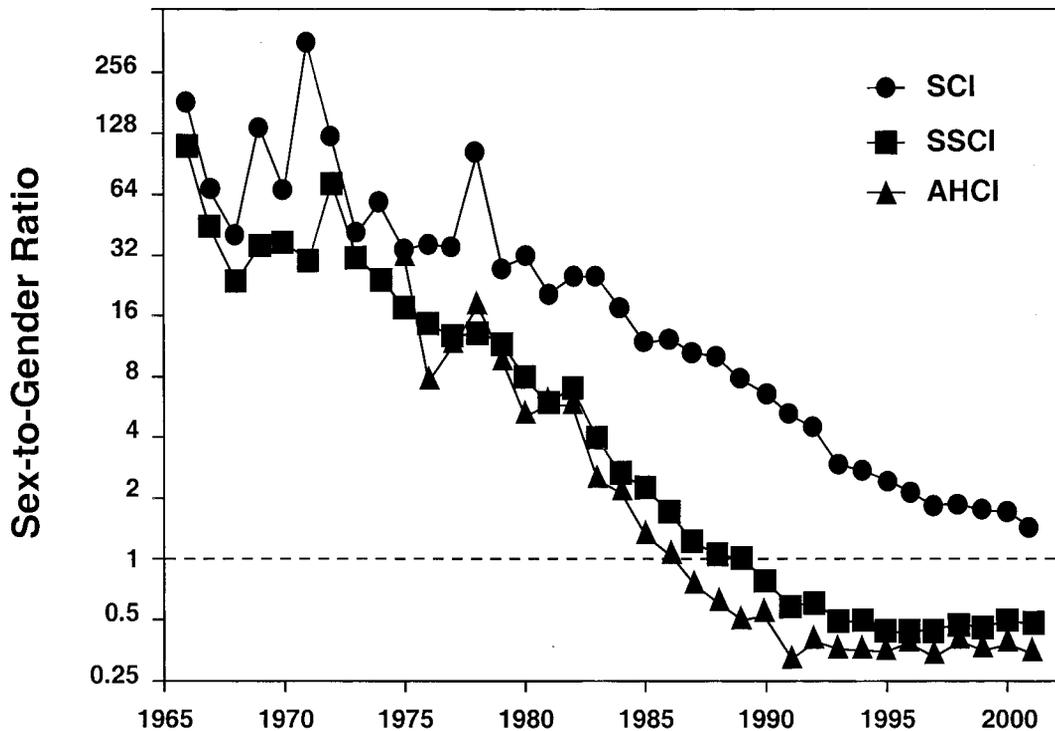


Fig. 1. The ratio of titles containing sex to titles containing gender for all articles in the Science Citation Index (SCI), Social Sciences Citation Index (SSCI), and Arts & Humanities Citation Index (AHCI).

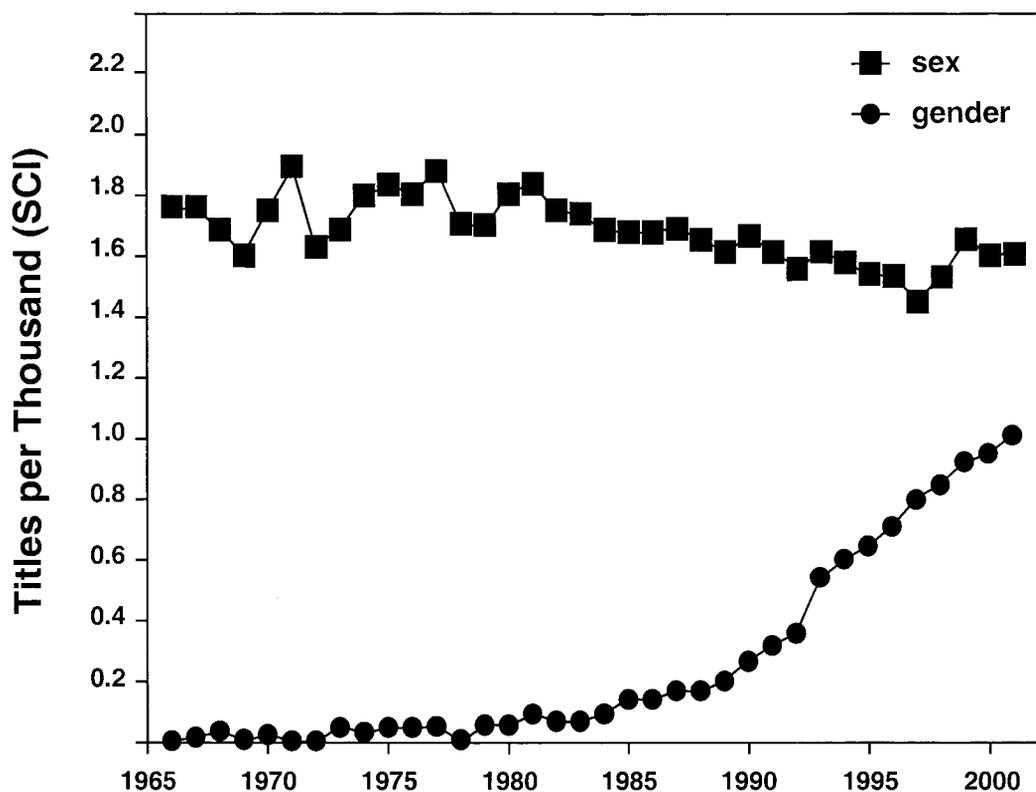


Fig. 2. Proportion of titles in the Science Citation Index containing the word *sex* and proportion containing the word *gender*.

1993). The decline in the sex-to-gender ratio in SCI began years before this Guideline and was not markedly affected by it, although there was a small acceleration in the decline in 1993. If the ratio of titles in SCI containing “sex differences” to titles containing “gender differences” is considered, this subsidiary ratio had been declining more rapidly than the overall sex-to-gender ratio since about 1985 (data not shown). Titles containing “gender differences” first outnumbered titles containing “sex differences” in 1994 (i.e., in the year following the Guideline) and have done so in every year since (except 1995).

Figures 2–4 present changes in the proportion of articles containing sex and gender (expressed as occurrences per thousand titles) for each of the three databases for the same years as covered in Fig. 1. Note that the vertical scales have been adjusted to reflect the fact that the proportion of titles containing sex and/or gender was far higher in SSCI than SCI, with AHCI intermediate. For SCI (Fig. 2), there was a small increase in the proportion of titles containing sex and/or gender over this period, from 1.8 per 1,000 in 1966 to 2.7 per 1,000 in 2001. From about 1980, gender began a steady increase in frequency, partly at the

expense of sex. The FDA Guideline on the evaluation of gender differences was possibly responsible for the extra large jump in the frequency of gender in 1993.

For SSCI (Fig. 3), there was a dramatic increase in the proportion of titles containing sex and/or gender from 3.4 per 1,000 in 1966 to 16.3 per 1,000 in 2001. Up until 1980, both gender and sex increased in tandem. During the 1980s, gender began a rapid rise in frequency at the expense of sex. From 1990, the frequency of sex has been roughly constant (as has the frequency of gender from 1995). Thus, there is a hint that the relative interest in sex-related subjects has reached a plateau in the social sciences.

The AHCI database contains data from 1975 until present. Figure 4 shows a dramatic increase over this period in the proportion of titles containing sex and/or gender, from .6 per 1,000 in 1975 to 7.1 per 1,000 in 2001, with a slight lag relative to the corresponding increase in SSCI (on the other hand, the fall in the sex-to-gender ratio in AHCI was slightly ahead of the decline in SSCI). The rapid rise in the frequency of gender began in about 1982, with a slower rise of sex from the late 1980s. Unlike SCI

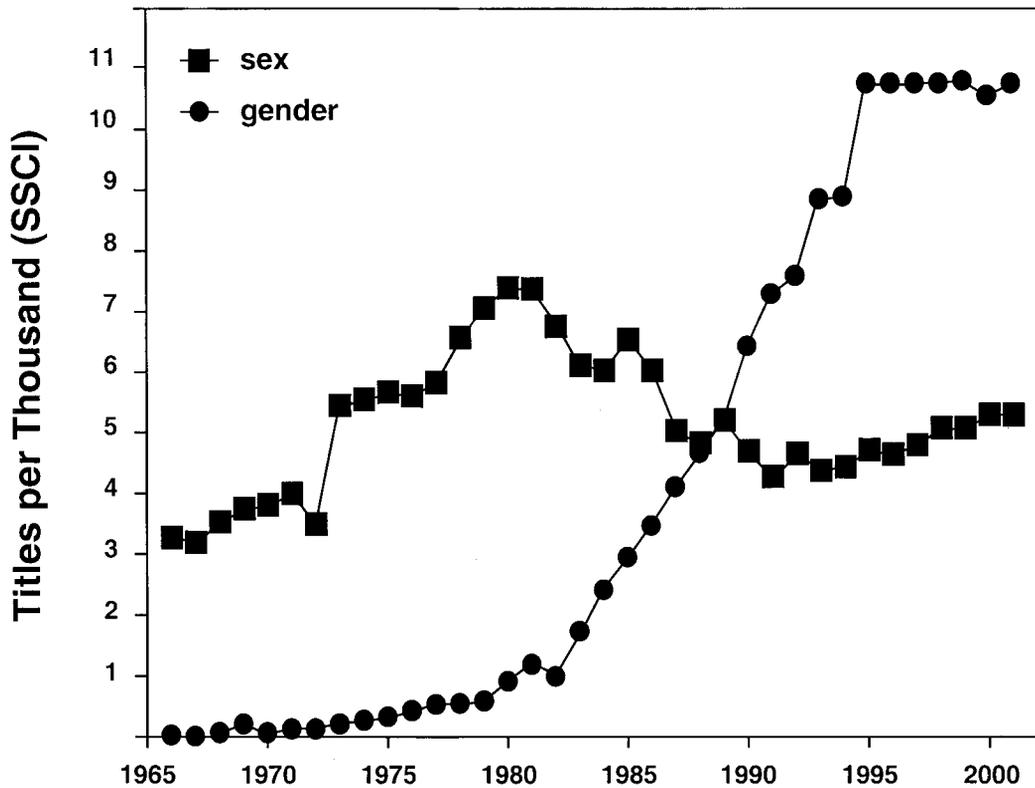


Fig. 3. Proportion of titles in the Social Sciences Citation Index containing the word *sex* and proportion containing the word *gender*.

and SSCI, the rapid rise of gender was not associated with a decline in the frequency of sex.

DISCUSSION

Sexological Origins

The first title in SCI to use gender in a nongrammatical sense was *Hermaphroditism, gender and precocity in hyperadrenocorticism: Psychologic findings* (Money, 1955). This article introduced the concept of a gender role: "The 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." This was one of a series of papers by Money and his collaborators that appeared in the *Bulletin of the Johns Hopkins Hospital* during that year. Other papers in the series employed the concept of gender role (Money, Hampson, & Hampson, 1955a, 1955b), without gender appearing in their titles.

The juxtaposition of *role* and *status* in the above definition suggests that Money was influenced by Parson's concept of *sex roles*. Money received his PhD in 1952 from the Department of Social Relations at Harvard University and listed Parsons among his teachers (Money, 1986, p. 5). For Parsons (1949), a status was "any patterned definition of who and what a person is" whereas a role was "the dynamic aspect of status, the behavior counterpart of the ideal or expected position defined by a status" (p. 43). Uses of *sex role* from the 1940s can be found in Parsons (1940, 1942), Cottrell (1942), and Mead (1949, p. 73). One of the many ironies to emerge from my analysis is that discussion of *sex roles* is now a staple of sociobiology (e.g., Vincent, 1994) without awareness of the term's origin in sociology.

Money (1996) later wrote that he imported the term gender into sexological science "to make it possible to write about people who came into one's office as either male or female, but of whom it could not be said that their sex role in the specific genital sense was either male or female insofar as they had a history of birth defect of the sex organs." He then continued grandiloquently, "The

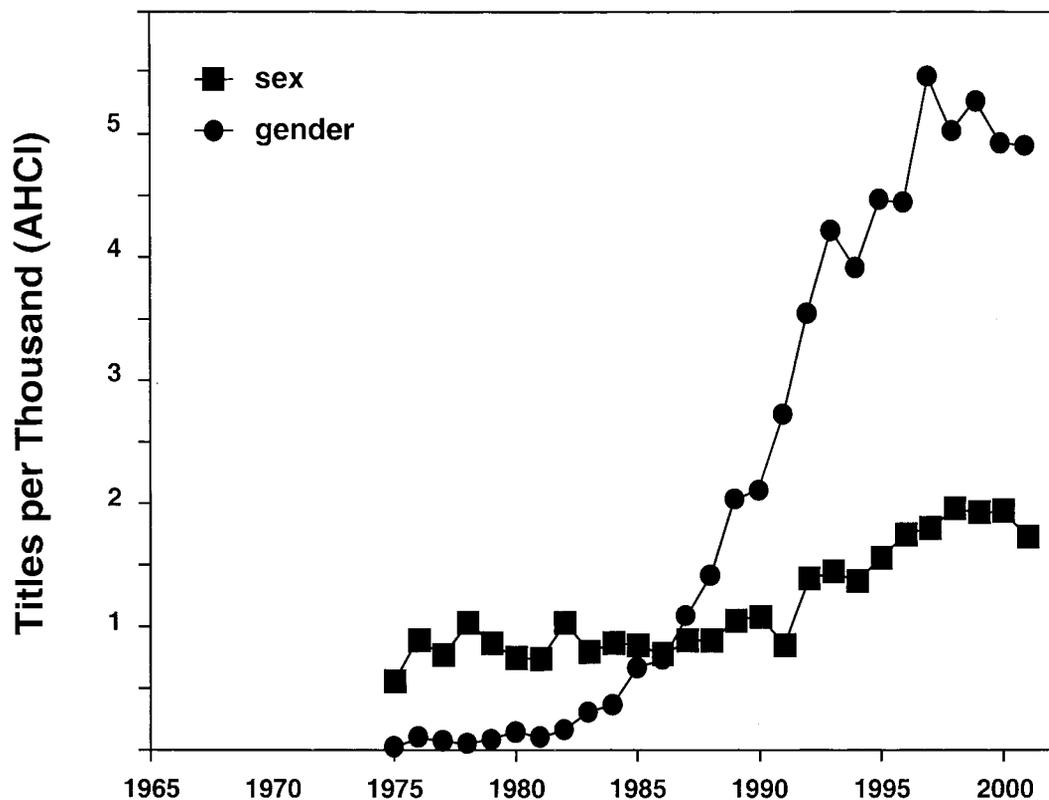


Fig. 4. Proportion of titles in the Arts & Humanities Citation Index containing the word *sex* and proportion containing the word *gender*.

majority of people who contributed to this new meaning of gender were hermaphrodites or intersexes. To them social science and social history overall owe a debt of gratitude. It is impossible to write about the political history of the second half of the twentieth century without reference to the concept of gender. This is particularly true with respect to the women's movement in politics" (p. xii). For similar reminiscences, and claims of priority, see Money (1973, 1985, 1995, p. 17ff.).

Excluding grammatical uses, most, if not all, of the gender-containing titles in SCI and SSCI from the 1960s appear to have derived the term from Money. These papers were mostly published in psychological journals and, at first, were concerned with individuals who did not conform to sexual stereotypes (hermaphrodites, transsexuals, transvestites, homosexuals, feminine boys, and masculine girls). However, in the late 1960s and early 1970s, gender began to appear in the titles of articles that addressed the behaviors and choices of individuals who conformed to gender stereotypes, with an emphasis on the extent to which the stereotypes were mutable or immutable, biological or social.

At this stage, it is worth discussing the causal connotations that had built up around *gender*. Money (1955) concluded that "Gender role and outlook as boy or man, girl or woman, was found to be in agreement with sex of rearing, except in three cases, and not to be automatically or instinctively determined by chromosomes, gonads or hormones." Similarly, Money et al. (1957) observed that "the sex of assignment and rearing is consistently and conspicuously a more reliable prognosticator of a hermaphrodite's gender role and orientation than is the chromosomal sex, the gonadal sex, the hormonal sex, the accessory internal reproductive morphology, or the ambiguous morphology of the external genitalia." They emphasized that "our findings indicate that neither a purely hereditary nor a purely environmental doctrine of the origins of gender role and orientation—of psychologic sex—is adequate."

Money and his co-workers offered two revealing analogies for the acquisition of a gender role: the first was the child's acquisition of a natural language (Money, 1955; Money et al., 1957); the second was the imprinting of a duckling on Konrad Lorenz when he imitated the

quacking of a mother duck (Money et al., 1957). In both these examples, the individual was seen as biologically primed to acquire a language or mother figure, but which language was acquired, or what individual was identified as mother, was determined by the environment. Consistent with these analogies, Money et al. (1957) believed that gender role was acquired very early in a child's development and once acquired was resistant to change: "Though the sex of rearing could transcend external genital morphology in psychologic importance, absence or correction of ambiguous genital appearance was psychologically beneficial. Reassignment of the sex of rearing after the early months of life was, without doubt, psychologically injurious." Although Money explicitly adopted an interactionist position as regards nature versus nurture, his work was implicitly read as lying at the nurture-end of the spectrum. Because a person's sex could differ from their gender role, gender became associated with a blurring of the male/female dichotomy, and the claim that upbringing trumped anatomy provided a powerful argument against the essential nature of sex differences.

An early person to employ the terminology of gender was the psychoanalyst Stoller (1964a, 1964b). For Stoller (1965), sex was biological but gender was social. The latter connoted "behavior learned from a tremendous pool of cues present in every culture and from a massive, intricate, though usually subtle, system of rewards and punishments in which every person lives from birth on" (p. 197). Although he did not deny some role for biology, Stoller (1968) wrote that "those aspects of sexuality that are called gender are primarily culturally determined" (p. xiii) and that "*gender* is a term that has psychological or cultural rather than biological connotations" (p. 9). Other psychoanalysts adopted a similar distinction between biological sex and social gender (e.g., Gershman, 1967; Ovesey & Person, 1973).

Stoller (1964b) and Greenson (1964) together introduced the term *gender identity* at the 23rd International Psycho-Analytical Congress in Stockholm (July–August 1963). The latter defined this to be "one's sense of being a member of a particular sex; it is expressed clinically in the awareness of being a man or male in distinction to being a woman or female." For Stoller (1968), "*gender identity* starts with the knowledge and awareness, whether conscious or unconscious, that one belongs to one sex and not the other . . . *gender role* is the overt behavior one displays in society, the role which he plays, especially with other people" (pp. 9–10). For Money and Ehrhardt (1972), "gender role is the public expression of gender identity, and gender identity is the private expression of gender role" (p. 4).

Feminist Adoption

The origins of the use of gender among feminist scholars has been variously dated to the late 1960s (Nicholson, 1994) or the mid-1970s (Unger & Crawford, 1993). My own analysis suggests that its widespread adoption in feminist circles was delayed until the late 1970s or early 1980s. The first gender-containing title in the Web of Science that had an explicitly feminist context was *Some evolutionary aspects of human gender* (Tobach, 1971), in an issue of the *American Journal of Orthopsychiatry* devoted to *The Women's Movement: Social and Psychological Perspectives*. In this article, Tobach differentiated "biological sex" from "societally assigned gender" and warned against using "concepts from evolutionary biology to justify either retaining old traditions or changing them." Her article cited neither Money nor Stoller.

Other early feminist uses of gender occurred in books (not indexed in the Web of Science). Holter (1970) used sex and gender as interchangeable synonyms, seemingly for variety, whereas Millett (1970, p. 29) makes only passing reference to a sex/gender distinction, which she illustrates with a quote from Stoller (1968). Likewise, Bernard (1971, p. 16) derived her definitions of sex and gender directly from Stoller (1968). Oakley (1972) defined sex as biological and gender as psychological and cultural (pp. 16, 158). After a discussion of the work of Money and Stoller, she posed the rhetorical question "Does biology play any role at all in determining the development of gender identity in normal individuals?" and answered:

The consensus of opinion seems to be that its role is a minimal one, in that the biological predisposition to a male or female gender identity (if such a condition exists) may be decisively and ineradicably overridden by cultural learning. Those who have worked in the field of hermaphroditic disorders and problems of gender identity seem very impressed by the power of culture to ignore biology altogether. (p. 170).

Differences between successive editions of *Masculine/Feminine or Human?* (Chafetz, 1974, 1978) are particularly illuminating. In the first edition, Chafetz (1974) contrasted *innate* gender with *learned* sex roles. This edition contained no citations to Money. However, by the second edition (Chafetz, 1978), the terms had been swapped—*innate* sex was contrasted with *learned* gender roles—and references were added to Money and Ehrhardt (1972). Allowing for the time lags associated with publication, this suggests an absence of feminist consensus on the meaning of gender in the early 1970s with an emerging consensus by the late 1970s (see Gould & Kern-Daniels, 1977). This timing is supported by Unger (1979) who was able to write in the *American Psychologist*, "The term gender is

introduced for those characteristics and traits socioculturally considered appropriate to males and females” (my emphasis).

The only use of gender that I can find in *Women, Culture, and Society* (Rosaldo & Lamphere, 1974) is in the psychoanalytic chapter by Chodorow. Significantly, Ortner did not use gender in her influential chapter—*Is Female to Male as Nature is to Culture?* (an amended version of Ortner, 1972)—but 7 years later she was an editor of *Sexual Meanings: The Cultural Construction of Gender and Sexuality* (Ortner & Whitehead, 1981). In *Gender and Sex in Society*, Duberman (1975) defined sex as “an ascribed social status referring to the biological differences between people” whereas gender role referred to “the socially learned patterns of behavior that differentiate men from women in a given society” (p. 26). In *Toward an Anthropology of Women*, Rubin (1975) discussed the sex/gender system, which she defined as “the set of arrangements by which a society transforms biological sexuality into products of human activity, and in which these transformed sexual needs are satisfied” (p. 159).

Trends in feminist use of gender were assessed by scanning the contents of early issues of *Feminist Studies* (first issue in 1972) and *Signs: Journal of Women in Culture and Society* (first issue in 1975). The first gender-containing titles in *Feminist Studies* did not appear until Volume 5 (Davidoff, 1979) and Volume 6 (Vance, 1980). These authors derived their uses of gender from Oakley (1972) and Rubin (1975), respectively. Yudkin (1978) had earlier used gender in a philosophical discussion of transsexualism, but without the term appearing in the title. She constructed a trichotomy between biological sex, psychological gender, and social sex role. Her use of gender derived from Money and Stoller. The first issue of *Signs* defined the journal’s scope as including both sex and gender (Stimpson, Burstyn, Stanton, & Whisler, 1975), but use of gender was sparse in early issues (and predominantly by male authors). The first gender-containing title in *Signs* did not appear until the sixth volume (Baker, 1980), in a review of the biological literature on sex differences that contained numerous references to Money and coworkers. Gender-containing titles first exceeded sex-containing titles in Volume 11 of *Signs* (1986–1987).

Gender did not achieve uncontested acceptance by all feminists. In *Transsexual Empire*, Raymond (1979) treated gender as a technical or therapeutic term associated with the work of Money and Stoller. She found the term to have “certain problems for a feminist critic” as it gives “the impression that there is a fixed set of psychosocial conditions that determines gender identity and role.” Nevertheless, there were times that she found the word un-

avoidable despite her “dissatisfaction,” and in these places she “used it with reservation” (pp. 8–10).

From these small beginnings, use of gender became widely adopted by feminists during the 1980s. It is this adoption that I believe is principally responsible for the explosive growth in gender-containing titles that is observed in SSCI and AHCI during that decade (see Figs. 3 and 4). Feminists were able to embrace the concept of gender as their own contribution to discourse as the term’s earlier association with sexological science shifted into the background.

Feminist usage converged on a contrast between socially constructed gender and biologically determined sex. However, it proved difficult to maintain such a distinction. One problem with the simple dichotomization of biological sex and social gender was that no term remained to refer to situations in which causation was unknown, disputed, or involved an interaction between biology and culture. Thus, the choice of term for this middle ground became a simple matter of preference, blurring the conceptual distinction between terms. Moreover, among feminists, the domain of gender had a tendency to expand to subsume the category of sex, because the way that people talk about “male” and “female” bodies was also seen as socially constructed (discussed by Nicholson, 1994). Kessler and McKenna (1978) provided an uncompromising example of this position. They saw the element of social construction as primary in all aspects of maleness and femaleness: even to invoke two categories was a social construct. To emphasize their contention, they wrote of gender chromosomes and gender hormones. In a retrospective, McKenna and Kessler (2000) returned to this theme: “Retaining a separation between sex and gender, even if it is proposed that both are socially constructed, raises the question of why biology is so important that it merits a special category.”

Given the expansion in the domain of gender, and a certain indeterminacy in its meaning, it is hardly surprising that some authors who were unfamiliar with the subtleties of feminist debate interpreted gender as a simple synonym for sex and adopted it as such in their own writings. This is unambiguously demonstrated when gender is used in relation to the physiology of nonhuman animals, without any implication of a determining role of culture in the causation of observed differences. Such titles first appear in the 1970s (e.g., Hahn, Norton, & Fishman, 1977) and are now common in SCI.

The appearance of gender in a title from the natural sciences now communicates little if anything about causation or the ideology of the author. Among the reasons that working scientists have given me for choosing gender rather than sex in biological contexts are desires to

signal sympathy with feminist goals, to use a more academic term, or to avoid the connotation of copulation.

Conclusion

This article addressed the history of terminology. During the first half of the twentieth century, gender appears to have been used predominantly in its grammatical sense, but its existing (albeit rare) use as a synonym of sex was readily available for anyone who wished to emphasize a dichotomy between different sources of sex-associated differences or to establish a separate domain for territory that had previously been considered part of the realm of sex. The expansion of the use of gender in the second half of the century appears to have derived from Money's concept of a gender role, introduced in the 1950s to refer to the self-identification of individuals whose genital sex was ambiguous. Significantly, in Money's usage, an individual's gender role could differ from various biological definitions of an individual's sex. From this beginning, there was a slow but gradual increase in the use of gender through the 1960s by writers, especially in the social sciences and among psychoanalysts, who wished to emphasize the environmental, social, or psychologic determinants of psychologic/behavioral differences between men and women. Some of these writers would have considered themselves feminists or at least sympathetic to the goals of the women's movement. Debates about nature versus nurture, the biological versus the social, and the autonomy of the social from the natural sciences, were of course much older than their association with a terminological sex vs. gender distinction.

Prior to the early 1980s, the rise in the use of gender in academic titles was not associated with an appreciable decline in the use of sex. The major increase in the use of gender, and the associated decline of sex, occurred in the 1980s after the adoption of *gender* as a technical term in feminist discourse. The available evidence strongly suggests that this usage was derived by descent with modification from Money. As the sex-to-gender ratio has declined, gender has come to be adopted as a simple synonym, perhaps a euphemism, for sex by many writers who are unfamiliar with the term's recent history.

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