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GENDER AS AN 'INTERPLAY OF RULES': DETECTING EPISTEMIC
INTERPLAY OF MEDICAL AND LEGAL DISCOURSE WITH SEX AND GENDER
CLASSIFICATION IN FOUR EDITIONS OF THE *DEWEY DECIMAL*
CLASSIFICATION

by

Melodie J. Fox

Submitted in

Partial Fulfillment of the

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May 2015

ABSTRACT
GENDER AS AN 'INTERPLAY OF RULES': DETECTING EPISTEMIC
INTERPLAY OF MEDICAL AND LEGAL DISCOURSE WITH SEX AND GENDER
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Melodie J. Fox

The University of Wisconsin-Milwaukee, 2015
Under the Supervision of Professors Richard P. Smiraglia and Hope A. Olson

When groups of people are represented in classification systems, potential exists for them to be structurally or linguistically subordinated, erased or otherwise misrepresented (Olson & Schlegl, 2001). As Bowker & Star (1999) have shown, the real-world application of classification to people can have legal, economic, medical, social, and educational consequences. The purpose of this research is to contribute to knowledge organization by showing how the epistemological stance underlying specific classificatory discourses interactively participates in the formation of concepts. The medical and legal discourses in three timeframes are examined using Foucauldian genealogical discourse analysis to investigate how their depictions of gender and epistemic foundations correspond and interplay with conceptualizations of similar concepts in four editions of the *Dewey Decimal Classification*. As knowledge organization research seeks solutions to manage the paradigm change from assumptions of universal knowledge to instability of knowledge, recognition of epistemological underpinnings of classification systems is necessary to understand the very real consequences of corresponding classifications of gender.

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TABLE OF CONTENTS

Chapter 1: Research Problem Statement.....	1
Epistemology	6
The Epistemic Spectrum.....	8
Universal stances.. ..	8
Postmodern stances.....	9
Social epistemologies.....	10
Epistemology in Bibliographic Classification	111
Ontology	11
Gender and Sex Classification	12
Oppression	14
Oppression in knowledge organization.....	17
Conclusion	20
Chapter 2: Literature Review	21
Scope of the Literature.....	22
Epistemology in Knowledge Organization Research	24
Specific Epistemic Stances	29
Social epistemologies.....	29
Individualist epistemologies.	34
Feminist, Transgender and Intersex Literature on the Classification of Gender	39
Feminist classifications of gender.....	40
Transgenderism and intersexuality	43
Epistemology and Metaphysics in Gender Classification	46

Classic essentialists.....	47
Revisionist essentialisms.....	48
Standpoint theory.....	51
Reactions to essentialism.....	51
Postmodernist epistemology.....	52
Middle ways: Concept theory, discursivity, and positionality.....	54
Conclusion.....	56
Chapter 3: Methodology.....	58
Epistemological Assumptions.....	60
Definition of Terms.....	61
Foucauldian Discourse Analysis.....	63
Genealogical Discourse Analysis.....	65
Discourse.....	Error! Bookmark not defined.
Classification and Discourse Analysis.....	69
Classification for Analysis.....	72
<i>Dewey Decimal Classification</i>	72
Internal Procedures.....	74
External Discourse.....	79
Limitations.....	844
Conclusion.....	855
Chapter 4: Findings, External Procedures.....	87
Analysis of the Discourse.....	94
Social Context 1871-1885.....	94

Medico-legal Metanarrative 1871-1885	95
Men and women.....	955
Intersex people.....	1077
Trans people.....	1122
Social Context 1958-1965.....	1133
Medico-legal Metanarrative 1958-1965	1188
Men and women.....	1188
Intersex people.....	1222
Trans people.....	1244
Social Context 1971-1979.....	1300
Medical-legal Metanarrative 1971-1979.....	1333
Men and women.....	1333
Intersex people.....	13838
Trans people.....	13939
Chapter 5: Findings, Internal Procedures.....	14949
Dewey Decimal Classification 1871-1876; 1876-1885	14949
First Edition, 1876	1511
Authority.	1511
Rhetorical Space.	1522
Fallibility/Universality.....	1544
Ontology.	1544
Necessary and sufficient conditions.....	1555
Second Edition, 1885	1566

Authority	1566
Rhetorical Space	1577
Ontology	1600
Necessary and sufficient conditions.....	1621
Summary of the First and Second Editions.....	1633
Seventeenth Edition, 1965	1633
Authority	1655
Rhetorical Space	1666
Necessary and Sufficient Conditions.....	16868
Universality/Fallibility.....	1700
Ontology..	1711
Summary of Seventeenth Edition	1723
Nineteenth Edition, 1979	1723
Authority	1733
Rhetorical Space	1755
Necessary and Sufficient Conditions.....	1766
Universality/Fallibility.....	17878
Ontology	17878
Summary of Nineteenth Edition	1800
Conclusion	1800
Chapter 6: Conclusions	1822
Law	1866
“User Groups” and their Interests	1866

Women and men.....	1866
Intersex people.....	1900
Trans people.....	1911
Conclusion to User Groups and Interests.....	1922
Legal epistemology—Justification of the ontological decisions	1922
Women and men.	1922
Intersex people.....	2022
Trans people.....	2044
Social Consequences of Legal Epistemology.....	2055
Summary of Law.....	20808
Science/Medicine.....	20909
“User Groups” and their Interests.....	20909
Women and men.	2100
Intersex people.....	2111
Trans people.....	2132
Medical Epistemology—Justification Of The Ontological Decisions.....	2143
Women and men.	2143
Intersex people.....	2200
Trans people.	2211
Summary of medical/scientific epistemology.....	2232
Social Consequences of Medical Epistemology.....	2233
Summary.....	2266
Dewey Decimal Classification.....	22827

User Groups and Priorities.....	22827
Epistemology	2300
Women and men.	2300
Intersex people.....	2377
Trans people.....	23837
Social consequences.....	23838
Discussion: Implications to Knowledge Organization	2411
Future Research and Conclusion	24949
Epilogue: Where Are We Now?	2511
References.....	25657

LIST OF TABLES

Table 1: <i>DDC</i> versions analyzed.....	90
Table 2: Simplified relevance criteria in four epistemological schools.....	187
Table 3: Typical path of sexual differentiation.....	256

Chapter 1: Research Problem Statement

Because classification separates likeness and difference, defining what makes things alike or different is an imaginative human act that is a necessary and fundamental part of classification. However, classifying human groups can lead to sensitive questions of identity, determinism, agency, power, and authority, as well as questions of whether the classification is “reflecting reality” or if it is overtly teleological. Additional complications include the limitations of language and ontological considerations such as warrant. Western classification principles, in particular mutual exclusivity, assign rigid borders to classes that disallow ambiguity, graded membership or participation in multiple classes. And, practically speaking, it matters. Gender, sexuality, gender expression and gender identity have blurred and become more individualized and fluid, yet most formal classifications of gender remain firmly binary. With more scholarly and popular attention being brought to gender diversity, the need to allow for more accommodating classifications has become more pressing.

As Stryker (2006) notes, any investigation of “embodied difference,” whether it is feminism, critical race studies, transgender studies or the like, results in revealing “systems of power that operate on actual bodies, capable of producing pain and pleasure” (p. 3). Real people are affected by classification—it is not restricted to theorizing. In this project, the concerns of three groups affected by formal classifications of gender will be addressed. First are women who identify with their sex, but do not identify with socially-ascribed gender characteristics of roles. These can be manifested through choice of appearance, behavior, occupation or any acts of rebellion against the norms. Along with women in general, I later specifically address the women who transgress against the

feminine roles of their eras by attempting to enter the professions of law and medicine. Next are transgender individuals whose gender identity and bodily sex do not match. Finally, intersex individuals are those who have outwardly or inwardly varying genitals, and consequently, their sex not clearly in one box or the other. More specific descriptions will occur below, but these groups have distinct but related struggles, and at times can work against each other. Because elements of this research focus on privileged women who strive to be attorneys and physicians, or women who do not need to work, or trans and intersex people who can afford medical care, for example, the results of this research are biased toward white, affluent people. Race and class are mentioned where significant; however, this study focuses on sex and gender rather than intersectional identities.

A scan of recent headlines illustrates a need to challenge the strict, binary definitions of sex and gender currently in use. Epicene athletes, such as South African runner Caster Semenya and Indian sprinter Duttee Chan, who both identify and compete as women, are required to undergo gender-verification testing prior to every competition (Levy, 2009; Hutchinson, 2015). Recent studies have revealed that medical school curricula include little to no instruction on the medical needs of gay and transgender people (Obedin-Maliver, et al., 2011). Elementary schools increasingly need to manage trans¹ and transitioning children (Irvine, 2013). Middle-school-aged students are

1 Greenblatt (2005, p. 87) notes that the term “transgendered” can be considered offensive (similar to the term “colored”), and therefore the term “trans” will be used to describe and identify this population. Additionally, I will on occasion use the plural pronouns “they” and “their” rather than gendered pronouns to refer to trans or intersex people in general terms or in cases where a preferred sex has not been stated. I will also refer to people in the pronoun of their lived gender before or after transition. Spade (2003) prefers “gender transgressive,” which encompasses the spectrum of trans identities (p. 17, n5).

increasingly being prescribed puberty suppressants to avoid developing features such as Adam's apples and breasts so that transitioning would be easier later on once a decision has been made; however, this process can also remove fertility (Talbot, 2013).

Intersex individuals are those with sex organs that do not fit the standard idea of male and female genitalia. Some parts may be absent, both a penis and ovaries may be present, they may be partially formed or be unusually shaped, or any number of variations. Intersex people may or may not identify strongly with a particular gender, and because of the standard of identifying sex with just a glance, at times may have no idea that they are intersex until a surgery or other procedure reveals the presence or absence of another organ. The concern of intersex people is to reduce the amount of cosmetic surgeries performed to "normalize" genitals, especially on babies or children. The intersex movement emerged in the 1990s and has shown to be quickly influential particularly in consciousness-raising (Greenberg, Herald & Strasser, 2010, p. 13). Foucault (1980) in his introduction to the memoir of the intersex Herculine Barbin points out that medical discourse dictated the choices one makes regarding gender choices: "It was no longer up to the individual to decide which sex one wanted to belong to, juridically or socially. Rather, it was up to an expert to decide which sex nature had chosen for him" (p. ix). Christmas (2010) argues, however, that many intersex people identify firmly with one of the two binary genders, and that assumptions should not be made that intersex people are of a third gender.

Currently, the term "intersex," includes a variety of conditions, yet with little consensus (Rosario, 2007, p. 262). The advocacy group, the Intersex Society of North America (ISNA) (2008) "find[s] that doctors' opinions about what should count as

‘intersex’ vary substantially,” and define it as “biological variation,” considering intersexuality a socially constructed concept (para. 7). Many intersex people never discover the condition because the difference manifests internally (e.g. extra internal organs) and it may not be known until it is uncovered in an autopsy or never. Many also never experience gender identity issues and identify with whatever gender was assigned at birth. Intersexuality may be dangerous if it interferes with necessary biological processes, or it can be completely physically harmless. How can difference as slight as “variation” be classified? Codified gender partitioning exemplifies oppression resulting from categorical assumptions and exceptions.

The purpose of this research is to contribute to knowledge organization by showing the epistemological underpinnings of classification structure and the resulting consequences, using gender as a case study. When groups of people are represented in classification systems, potential exists for them to be structurally or linguistically subordinated, erased or otherwise misrepresented (Olson & Schlegl, 2001). And, as Bowker and Star (1999) have shown, the real-world application of classification to people can have legal, economic, medical, social, and educational consequences. As knowledge organization research seeks solutions to manage the paradigm change from assumptions of universal knowledge to instability of knowledge, recognition of epistemological underpinnings of classification systems can help understand the very real consequences of corresponding classifications of gender. Hjørland (2010) writes, “The relative strengths and weaknesses of different [epistemic] approaches are an important research question for the field of KO” (p. 40). What is meant by strengths and

weaknesses could mean anything from retrieval effectiveness to respect given through rhetorical space to terminological agency and subjectivity.

Do classification systems exist that can accommodate less rigid borders and liberate gender from the typically binary or trinary pigeonholes, or what Gilbert (2009, 93) refers to as “strict bigenderism?” By “classification,” it is important to note that what is meant is formal, anthropogenic, institutionalized systems of classification, such as bibliographic, disciplinary or organizational systems, not the mental processes of categorization that take place in the human mind or metaphysical “first origins” that would be impossible to discern. This study concerns the epistemic foundations of the classification of gender as it is ontologically formalized into knowledge structures for a specific purpose.

The problem statement is organized in the following way. First, several key areas are discussed and relationships between them explicated: 1) the definition of epistemology and an introduction to the epistemic spectrum, along with its relationship to knowledge organization; 2) epistemology’s effects on how gender is categorized; and 3) the meaning and consequences of oppression 4) and finally, how oppression manifests in classification. This discussion will be used as a foundation to analyze the implications sections of the dissertation, where a selection of discursive depictions of gender from the legal and scientific domains have been examined and compared to those in the *Dewey Decimal Classification*, a bibliographic classification scheme, to how they interplay to discursively define gender.

Epistemology

Epistemology is the branch of philosophy that studies knowledge and who can know, what constitutes reality and the gaps between knowledge and reality or knowing and being (ontology). Frohmann (1994a) describes the critical approaches to evaluating knowledge organization systems such as classification schemes as scientific, psycholinguistic, linguistic and pragmatic, and he argues that evaluation is an epistemological problem, since the different approaches would apply different evaluative standards (p. 119). In order to study and understand classification and other methods of organizing information, the stance on knowledge and knowing must be defined. To start, the important considerations in the study of epistemology are outlined.

Epistemology examines the relationship between the knower and the object of knowing, in particular determining how much that object is interpreted or defined by the knower, and whether the object has any agency to affect how it is being defined or known. A stance's location on the epistemological spectrum depends on how much objectivity or subjectivity occurs with any individual. In traditional, philosophical epistemology, which seeks "truth" or universal knowledge, an individual knower attempts to expunge any sort of emotion, needs or passions from the process of knowing, in order to arrive at "pure," independent, or value-neutral knowledge (Longino, 1993, p. 104). Code (1991) writes that traditional, academic philosophers consider the knower "a featureless abstraction" (p. 1) which effectively erases the influence of context.

Though the main critique of language in knowledge organization primarily relates to thesauri such as subject headings, the classification of gender in particular also is affected by language. Language is a byproduct of categorization; that is, as we move

about the world, items that we encounter are placed into categories with names established in our minds. For ambiguous categories, a name may not exist for that item. Consequently, the limitations of the English language are responsible for some of the failure of imagining gender as fluid. The English language limits us to the use of gendered pronouns that force us to choose a gender when interacting with someone, which can be uncomfortable. While most of the time it is easy enough to “look and see” what gender someone presents, looking and seeing is not a no-fail methodology. Choosing a gender when perceiving someone causes anxiety for both parties and dehumanizes the interlocutor who has ambiguous gender traits. Gilbert (2009) writes that without having gender category information, “we are practically incapable of interacting and at a loss as to how to communicate” (p. 93). A transitioning female-to-male (MTF) trans person interviewed by Morgan (n.d.) recalls that he would “give [people] five minutes to look me up and down and decide what the hell I am;” otherwise, they could not concentrate on what he was saying (p. 145). Another transitioning (FTM) interviewed by Morgan and Stevens (2008) expresses a desire to remain ambiguous, but regardless of this desire, the person is trapped by gendered pronouns:

I don't identify as a man, but the world sees me as a man. I would rather be a gender queer, gender bending, masculine looking person, who has a lot of what traditionally are assigned as feminine qualities than the other way around, being seen as a woman or as female with butch qualities. (p. 594-595)

The desire to remain unclassified speaks volumes for the wariness (and weariness) of being burdened by expectations to fit precisely into particular categories. This person has positioned himself in the gaps between genders, where currently no language exists for

him to express his subjectivity. When discussing him, the inaccurate “him” must be chosen over the demeaning “it.” Attempts to create a neutral pronoun system in English, which have occurred since at least the eighteenth century, have been met with ridicule by the mainstream, in what Baron (1986) calls “a history of shame” (p. 9). However, the need for them is evident and change is slowly occurring, as some trans people identify with and use neutral pronouns such as “ze” to replace “he” and “she,” or “hir” to replace “him” and “her.” The risk of creating a class for ungendered people is that the qualities are reified by defining them, yet the double bind exists that if it remains undefined, it remains illegitimate.

Though many nuanced epistemological stances exist, a rudimentary discussion of the epistemic spectrum is presented here, with more detailed explanation of identified stances appearing in chapter 6. Epistemic stances are typically roughly arranged along a spectrum which for simplicity’s sake will be rudimentarily presented here with the acknowledgement that more complexity exists. Olson (2012) points out that a universalist stance, or one that accepts universal knowledge, historically was the sign of a “civilized society,” demonstrating its progress towards knowing truth (p. ix). On the other hand, a stance that recognizes and values subjectivity would land on the postmodern end of the spectrum, where reality is constructed by individual perspectives and consequently mind-dependent. In the middle are social approaches where knowledge is generated collectively and critical realist perspectives, where a mind-independent reality exists, but our knowledge of it is imperfect.

The Epistemic Spectrum

Universal epistemic stances. Most traditional methods of scientific classification take universal epistemological stances, which are based on logical structures and assume

one classificatory position per “thing,” even if multiple topics exist or characteristics overlap. A universal stance is attractive for a number of reasons, but primarily because one standard set of conceptualizations can be used in all contexts. Universal stances originated from the Platonic concept of forms articulated in the fourth century BCE and remained relatively stable until the turmoil created by the advent of postmodernism in the mid-to-late twentieth century. Haraway (1991) writes that scientific objectivity considers the object of knowing as “passive and inert” (p. 197), which, in the case of gender can be dangerous. With the object of knowing denied agency, it becomes a product of the knower, which, history has shown, prevents self-definition. As an example, guideline RE9958 of the American Academy of Pediatrics calls the birth of an ambiguously-gendered child a “social emergency,” and calls for the assembly of a team of experts to help determine the child’s “true sex” (Hester, 2004, pp. 215-216). Because society possesses no tolerance for ambiguity when it comes to gender, a family cannot wait to for the child to decide a gender identity, and so consequently the medical team must make a determination. Intersex babies are typically “assigned” a gender and their sex surgically altered around 18 months old (Hale, 1996), at times with disastrous results, such as in the recent case of the child whose adoptive parents are suing over a surgery that assigned a baby to the wrong gender (Jenkins, 2013). In his introduction to Herculine Barbin’s memoir, Foucault (1980) asks, “Do we truly need a true sex?” (p. vii), which begs the question of whether a “true” sex exists in all cases and what “sex” means in the first place.

Postmodern epistemic stances. On the postmodern end of the spectrum, “reality” is dependent on an individual human’s perspective, regardless of the instability of what is considered knowledge. Postmodern stances signify a messiness that is attractive in its

explanatory power, but a significant obstacle to knowledge organization as we know it because of the dynamic and individual nature of the knowledge being organized. For gender, postmodern views reject stable categories and give the subjectivity to the individual object as knower. Therefore, the object has the authority to either accept or reject gendered traits or roles, or reject their biological sex. However, despite how much the individual “knows” about what sex he or she is, society places many obstacles in the way of expression. For example, even though obstetricians typically proclaim sex with a cursory glance at the genitalia at birth, those seeking a sex change must “live” in the other gender (genitalia notwithstanding) for a prescribed amount of time, usually one year, before going ahead with medical intervention.

Social epistemologies. Between universal and postmodern epistemologies lie the social epistemic stances, or those that accept group knowledge, either such as that of a demographic or marginalized group, or a pragmatically-based community of practice or domain. Those too are attractive in that they suggest that consensus-driven knowledge can be identified for a specific group, but again, a major flaw might be the essentialist assumption that identity categories necessarily share a collective way of thinking. An additional stumbling block may be usefulness in environments where a more general classification is necessary. A multitude of variations on these fundamental categories exist that attempt to reconcile perception, reality, truth, and being, including various modes of epistemic pluralism. More recent developments in research have addressed social and emotional influences on epistemology, as well as differences in what constitutes material reality and how and whether that can be known. As a branch of philosophy, epistemology is speculative. The “right” epistemology cannot be determined.

Rather, the consequences of the identified stance taken are the more important consideration (Fox, 2014, pp. 242-243).

Epistemology in Bibliographic Classification

Bibliographic classification schemes, such as the *Dewey Decimal Classification* (DDC) or *Library of Congress Classification*, are comprised of a western, Aristotelian structure that follows a universalist epistemology (Olson, 1999b). This disallows graded membership or membership in multiple classes, which, when classifying human groups, can mandate accidental characteristics as essential to all members of the group. Also, those who may fall in the borderlands between classes or belong to multiple classes are forced into one or the other. As a consequence of this recognition, a paradigmatic shift has recently occurred in knowledge organization that explores how to manage or include multiple epistemic perspectives in classification and provide more subjectivity for people as both users and objects in classification schemes. For example, Hjørland & Hartel (2003) argue for the consideration of four epistemic stances in creating and evaluating knowledge organization systems such as classifications: empiricism (confirmation through experience/observation), rationalism (use of reason), historicism (development and understanding of a subject through time), and pragmatism (practical goals and uses) in the hopes that they cover all angles of a subject. Even those researchers who seek universal, phenomenon-based classifications (e.g. Gnoli & Poli, 2004; Gnoli, 2012) find ways to accommodate different perspectives. The progression of knowledge organization research will be explored in more detail in the literature review in chapter 2.

Ontology

Closely related to the concept of epistemology is ontology, or the study of being, or what “is.” Because their relationship could potentially cause confusion, it is important

to clarify their link in terms of this project. The term ontology is used inconsistently in knowledge organization, sometimes referring to the philosophical meaning—what “is” being organized—and sometimes used as a synonym for classification—the structure and characteristics of a category. The latter term especially prevails in retrieval-related literature (Smiraglia, 2014, p. 43; Martinez-Avila & Fox, in press). Philosophically, epistemology relies on ontology to tell us what “is,” and ontology relies on epistemology to tell us how we can know what “is.” Structurally, epistemology tells us how the knowing occurs or what the values are behind the decision-making; whereas ontology is more descriptive of what is known based on the epistemic stance. In other words, ontology provides the actual qualifications or definition of a “thing,” and epistemology provides the belief system for why the particular definition, structure, facets or qualities were chosen. This project focuses on epistemic stance; however, the ontological status often serves as the manifestation of the epistemic stance, so both are discussed.

Gender and Sex Classification

Placing humans in groups is sticky. No matter the group, classification of humans leads to uneasy questions of how identity is formed, which can directly conflict or be supported by group membership. What is the purpose of grouping humans? If it is the same purpose as grouping anything else, it would be to gather like items and separate different ones. It is to include, to exclude, or both. In libraries, this purpose both reflects the subject of bibliographic groups, and also attempts to identify groups for the purpose of reflecting the subject matter of the work being classified (literary warrant). But for humans, “difference” can be a loaded term that can imply inferiority and marginalization, and “sameness” can imply determinism. Rubin (1975) established a foundational understanding of what she calls the “sex/gender system,” by which she means the process

of attributing gender to sex. However, even that understanding is hobbled by the assumption that only two binary sexes exist. The unity needed to fight oppression requires the ability to coalesce as a group, which is another complication to a more nuanced understanding of sex and gender classification.

In terms of sex and gender classification, epistemic stance suggests the degree humans have in self-definition. Who “authors” sex and gender? What is their authority? Is the knowledge classification a result of an explicit or implicit agenda? A universal epistemic stance may suggest that despite a person’s preferred gender identity, the person’s gender (the object) can only be defined by the perceiver or some other established authority (e.g. a law stating that birth sex is immutable). Women have been subject to the imposition of such gendered characteristics as being naturally gentle, emotional, talkative, nurturing, weak, noncompetitive, or in possession of female sex organs, and for men, that they are aggressive, authoritative, interested in sports, or unemotional. To author one’s own gender can involve resisting the accidental qualities assigned by others by merit of membership in a particular gender category whether physical (e.g. gender identity differing from physical sex). Those identifying with no gender may be erased altogether or be assigned a gender if such a category does not exist in the universal classification (e.g., checking the M or F box on a form). In a simple example, in 2011 in New Jersey, a trans man was terminated from his position observing males undergo urine drug tests once it was found he was born female, since only men are allowed to perform the job (Perez-Pina, 2011). The epistemic stance taken by the agency that fired him is that even though he has performed or “authored” his gender as a man since he was five years old, their classification is rigid and disregards his identity,

claiming their view as the authority. A male is a man and a female is a woman. If the agency were to assume a more postmodern epistemic stance, it would assume the trans man authors his reality, and that reality is that he is a man despite that he was born with female sex organs. By disallowing women to perform the job, it also tacitly assigns assumptions to both genders. These assumptions could have innocent origins in not wanting to cause discomfort, but then the assumptions pile up regarding sexual desire, power relations and physiology.

Oppression

Before proceeding, it is important to understand what is meant by “oppression,” as the term carries much weight, but can be misapplied to any situation of human unhappiness. Spade (2011), influenced by Foucault’s notion of power, finds “oppression” a misleading term in that it suggests “that one set of people is dominating another set of people,” when in reality power operations are much more systemic and complex and cannot be “fixed” by changing one person or one aspect (p. 25). Instead, Spade prefers the term “subjection,” since “it indicates that power relations impact how we know ourselves as subjects through these systems of meaning and control” (p. 25). However, I will use the seminal definitions of oppression as described by Marilyn Frye and Iris Young, which are still useful and should not be omitted. Additionally, the findings show that in some instances that one set of people is dominating another set of people; therefore, the original terminology will be used.

Frye (1983) narrows the definition of oppression down to several forms of women’s oppression that can be applied to other instances of oppression: the double-bind, systemic barriers, assimilation and servitude. The double-bind occurs where “options are

reduced to a very few and all of them expose one to penalty, censure or deprivation” (p. 2). As examples, Frye uses the prude/whore dichotomy applied to young women or the working mother/stay-at-home mom opposition to illustrate that they are “caught between systemically related pressures” (p. 3). Systemic barriers include those that have nothing to do with “individual talent or merit, handicap or failure,” but rather “membership in some category” (p. 7) and “restrict or penalize motion in any direction” (p. 4). Examples could include anything from being sexually discriminated against at work to being deemed “unfeminine” (p. 4). Frye also identifies “assimilation into the patriarchy” or adapting to masculine norms, as a phenomena resulting in resentment between and among women of different classes (pp. 8-9). Finally, Frye sees a condition of servitude as pervasive in the condition of womanhood. She acknowledges that women certainly can and have asserted themselves toward their own interests, but “at every race/class level and even across race/class lines men do not serve women as women serve men” (p. 10). By “serve” Frye means the nurturing roles such as mother, assistant, and wife that subordinate individual interests to support others. The oppressions are a direct result of a person’s chosen identities, the “social categories in which an individual claims membership as well as the personal meaning associated with those categories,” which is how an individual expresses a sense of self (Shields, 2008, p. 301).

Also noting that a strict, singular definition of oppression is impossible, Young (1990) explains, “All oppressed people suffer some inhibition of their ability to develop and exercise their capacities and express their needs, thoughts, and feelings.” (p. 40). In an effort to flesh out the definition, she breaks oppression into five categories: exploitation, marginalization, powerlessness, cultural imperialism and violence.

Exploitation results from “the transfer of the results of the [paid or unpaid] labor of one social group to benefit another” (p. 49). Young calls marginalization “perhaps the most dangerous form of oppression,” where “a whole category of people is expelled from useful participation in social life and thus potentially subjected to severe material deprivation and even extermination” (p. 53). The powerless are those “situated so that they must take orders and rarely have the right to give them” with “little opportunity to develop and exercise skills” (p. 56). Cultural imperialism occurs when “the dominant meanings of a society render the particular perspective of one’s own group invisible at the same time as they stereotype one’s group and mark it out as the Other” (p. 59). Finally, violence is considered oppressive, not only because of the obvious physical consequences, but also because of the “daily knowledge shared by all members of oppressed groups that they are *liable* to violation, solely on account of their group identity” (p. 62, emphasis Young’s). Violence can include physical violence as well as harassment and intellectual violence. The common denominator to all of these oppressions is that they occur as a result of group membership. Additional types of oppression involve the “disciplining” of the physical body to meet established gendered expectations, whether through appearance or behaviors, such as those identified by Bartky (1998) and Hochschild (1979).

While Frye and Young have in mind membership of established gender categories, Butler (2009) notes that “the ‘appearance’ of gender is often mistaken as a sign of its internal or inherent truth” (p. i), meaning that it is assumed that whatever is on the outside is also on the inside, both physically and in bearing. Despite efforts to match the inside and outside, gender recognition laws are inconsistent from state to state, so a person may

be considered one gender in one state, and a different gender in the next state (Spade, 2004; Newlin, 2008). Similarly, processes and results of gender recognition vary from state to state. If trans people desire a gender amendment on a birth certificate, for example in California, they must fill out a number of forms, pay fees, appear before a judge with certified documentation attesting “clinically appropriate treatment for the purpose of gender transition” (Cal. Health & Safety Code §103425). To marry, they must prove gender congruence with their sex, and can only marry if the gender and sex match and are the opposite of the partner.

Oppression in knowledge organization. The notion of oppression can also be interpreted as a type of conceptual violence through the categories as wrought by Frye and Young and related to principles of classification, categorization and linguistic representation. In classification, oppression occurs through overt or insidious bias that potentially can deny access through structures created by and for a dominant class. Oppression can take forms “embedded in unquestioned norms, habits, and symbols, in the assumptions underlying institutional rules and the collective consequences of following those rules” (Young, 1990, p. 41). A consequence of classification being socially constructed is that the bias of the classificationist, which can be individual, institutional or structural, filters down to users of the system, whose knowledge structures are shaped by the ways knowledge is represented. Budd (2003) describes classification as an agent of “symbolic power,” and points out that without seeing classification as a “discursive act,” categorical differences can be perpetuated (p. 28). The disconnect between classificatory position and search attempts can affect information retrieval, which results in information being undiscoverable, a disempowering or oppressive effect.

The acceptance of these practices as “normal” or the inability to recognize them constitutes the type of oppression that Frye (1983) calls “assimilation into the patriarchy” (p. 9). For example, the terms “transgender” and “intersex” share a facet in the 23rd edition of the *DDC*, which leads to assumptions that the terms may be interchangeable or that the groups share the same concerns.

Until researchers took up the cause, users of bibliographic classification systems experienced the “injustices some groups suffer as a consequence of often unconscious assumptions of well-meaning people in...the normal processes of everyday life” (Young, 1990, p. 41). Olson and Schlegl (2001), in a meta-analysis of knowledge organization literature written since the 1970’s, identified 31 identity-related topics found to be affected by four different types of bias in knowledge organization standards, which includes both classification systems and verbal subject representation: subject heading lists and thesauri. Regarding classification, first, the topic can be treated as an exception, as if its existence strays from the norm (e.g. a class for female doctors when no class exists for male doctors). Also, the topic can be “ghettoized,” or exiled to a class, which removes it from a broader swath of categories such as *DDC*’s (1885-1965) infamous 396 class that lumps women into one class, removing them from inclusion in the general classes (discussed in detail later). Third, the topic can simply be omitted, as if it does not exist (e.g. no class for women in *DDC* 1). Fourth, it can be lost in a structure that does not follow the rules of the classification scheme, again, such as “Women” as a subdivision of “Customs, Costumes, Popular Life” (2nd- 16th editions, 1885-1965), and finally, the terminology can be biased (e.g. “Biographies of Eccentrics, Cranks, and Fools”) (p. 65), which can be a form of intellectual violence. To add to those,

classifications can also commit cultural imperialism by subordinating or delegitimizing groups, making condemning moral judgments, reinforcing stereotypes or dehumanizing groups. Adler and Tennis (2013) also create a “taxonomy of harm” that builds on Olson and Schlegl’s rubric, enumerating further ways that oppression can be committed in classification adding “pathologization,” where the classification diagnoses through structure (e.g., homosexuality classed under “perversion”), and “erasure,” which is omission that is intentional rather than accidental (“hermaphrodites” removed from the classification and restored in the next edition).

Objectors may question whether the structures in bibliographic classification truly oppress users because of the invisibility of the structure in the catalog. In other words, when searching a library catalog, users are not exposed to the names of classes nor the placement within of structure because unlike subject headings, which appear on the catalog record, classificatory position is simply represented by a call number. However, as Christensen (2011) cogently shows in his pragmatic study tracing how particular intersex titles are classed, the placement on the shelf and the surrounding works serendipitously discovered while browsing tell a story of the concept space. The appropriateness and fit with the nearby titles can reveal the biases, ignorance, or indifference of both the classificationist and classifier. The nearby titles also reveal the hierarchical associations.

If a searcher cannot find information, finds information in a judgmental hierarchical position, or finds it represented in an otherwise demeaning fashion, it may be perceived as truth. While inanimate objects like rugs or sea sponges may not care where or how they are classified, groups of people do care, as it can carry medical, legal, social, and

educational consequences, among others. Dewey (1876) repeatedly called it sacrificing “theoretical harmony and exactness...to the practical requirements of the library” (p. 4); Hansson (2013) calls it “pragmatic adjustments [to ontology and epistemology] for bibliographic purposes” (p. 389), but to people it matters. Smiraglia (2006) writes, “when a gay adolescent searches for literature to help understand and finds that it all falls under ‘perversion’ then we have oppressed yet another youth” (p. 186). Not only has the youth been oppressed, but anyone else can take this classificatory judgment to be truth and may perpetuate stereotypes and prejudicial behavior that spill out into practical life.

Conclusion

Budd (2003), following Pierre Bourdieu’s and of Jurgen Habermas’s theories of praxis, argues that many library practitioners unwittingly proceed in a state of “epistemic doxa” or “unthought” (p. 30), not realizing how library policies have social impact on users. However, the myriad epistemological stances underlying knowledge organization theory, which will be outlined in the next chapter, demonstrate an attempt to support praxis with theories of knowledge. Foucault (1977a) writes, “Each society has its regime of truth...that is, the types of discourse which it accepts and makes function as true; the mechanism and instances which enable one to distinguish true and false statements, the means by which each is sanctioned; the techniques and procedures accorded value in the acquisition of truth; the status of those who are charged with saying what counts as true” (p. 131). The tools of knowledge organization make up and are supported by this discourse, so it is important to examine the theories of knowledge that underscore them.

Chapter 2: Literature Review

Though formal gender classification will be examined rather than cognitive perceptions of gender, it is important to understand the landscape onto which the formal classifications are projected both in gender studies and in knowledge organization research. Hjørland (2010) believes concepts constitute the “building blocks” of classification, writing, “A classification is thus a structure of concepts (classes)” (p. 38). Consequently, this project must describe the different ontological formulations of the concept of “woman,” with the epistemology telling us how we know this. As Mikkola (2009) asks, questioning the definition of “woman” confounds most people: “Aren’t women simply female humans?” (p. 560). But the answer is not simple for historical, political and social reasons, as described in the previous chapter. The literature on this topic spans a multitude of disciplines, including law, philosophy, history, psychology, anthropology, ethnography, zoology, sociology, literary and critical studies, and, of course, women’s studies, as well as the more recently-emerging gender studies fields that include the study of trans people and masculinity. Intersex people have been consistently written about since at least Aristotle (as “hermaphrodites”), but over the twentieth century, a growing batch of research has emerged from a number of fields, including legal and medical-scientific fields.

It is also crucial to understand the backdrop of the field of knowledge organization related to the epistemology(ies) underlying classification. Research exploring the social side of knowledge organization has increased dramatically in the last two decades, as researchers have begun to analyze epistemological aspects of knowledge organization using critical or postmodern theories. Mai (1999) discusses the shift in classification

theory from modern to postmodern, and the following year issues a call that “future research agendas within knowledge organization should focus on studying the social and cultural aspects of knowledge organization and show how insight into this could enhance theory and practice” (Mai, 2000a, p. 61). Similarly, Andersen & Skouvig (2006), analyze knowledge organization socio-historically, through the lens of critical theorists Foucault and Habermas, concluding that “An awareness of society and its social and political structures and their materialization in recorded discourses does not appear to be a fully formed trait of the study of knowledge organization in LIS” (p. 301). They contend that in using critical theory frameworks, “LIS may connect to other social science and humanistic fields addressing issues of the organization of power, knowledge, and texts in society and culture” (p. 303). The shift to postmodern analysis reflects an effort to point out assumptions entrenched within the discipline, practice, science, and wider research community. Over ten years since Mai’s call to action, virtually every paper in the proceedings of the International Society for Knowledge Organization (ISKO) 2010 conference and a large portion of the 2014 conference proceedings relate to epistemology, and a collection on epistemology in KO has been recently published (*Cultural Frames of Knowledge*, 2012), demonstrating that Mai’s call was heard and that the cultural aspects have been deemed worthy of study by the field.

Scope of the Literature

The literature must be precisely defined, as much ground needs to be covered. Consequently, several related bodies of research will be omitted from this review. The literature on the classification of gender contains many difficult and contentious questions, for the delineation of sex and gender categories is central to determining who

is entitled to legal rights, political rights, and protection from discrimination. What comes first, commonality or politics? Can anyone be a woman? Are androgyny or humanism solutions? Who has the right to “author” gender? Since much of feminist literature refers at least tangentially to the characteristics of women and men, I will restrict the review to only research that’s *raison d’etre* is to grapple with the question of how gender is defined—following Hjørland’s (2010) notion of concepts as building blocks of classification—not those that critique women’s social roles or legal rights. Also excluded will be literature regarding the concerns of sexual orientation. Desire and sexuality only constitute a slice of overall gender identity, although gender identity and sexual orientation are often conflated. As Vade (2005) notes, “Gender identity is who one is. Sexual orientation is to whom one is attracted...As soon as we recognize that there are more than two genders, the terms ‘homosexual,’ ‘heterosexual,’ and ‘bisexual’ no longer make sense” (p. 270). A wide range of literature beginning in the late 1980s also refers to what is called “intersectional” locations; that is, categories that exist at the intersection of sex and another oppression, such as race and class, but many of these also accept the concept of woman, albeit not as a singular, “pure” category. However, this literature is also beyond the scope of the paper.

Epistemology as a branch of philosophy has origins in ancient texts and is a discipline unto itself; therefore, only epistemology as it appears in knowledge organization literature, and more specifically, classification research, will be covered. Classification literature referring to gender will be covered, including the rare works where both gender and epistemology are considered. Finally, literature from women’s and gender studies that relate to the classification of gender are described. Though much

of the gender studies literature dips into metaphysics, the arguments are important to include since they affect epistemology.

Epistemology in Knowledge Organization Research

Epistemology is relatively new in knowledge organization research, emerging mostly in the 1990s and then exploding in the late 2000s. The added dimension of epistemology to the research base has echoed similar shifts elsewhere in the humanities as the liberation movements of women, LBGT, American Indians, and blacks challenged contentions that knowledge is stable and universal. According to Hartsock (1990), the main intellectual tasks of these movements were critique and construction: those who were “not allowed to be subjects of history, who have not been allowed to make our history, are beginning to reclaim our pasts and remake our futures on our own terms” (p. 163). Those movements challenged the universality of the knowledge named and proclaimed from the dominant perspective of the white, Western, heteronormative, affluent, Christian male.

Concurrently in knowledge organization research, the social aspects of classification also were investigated, and classification schemes came to be diagnosed as products of their time (Foskett, 1971), of their disciplines (Hjørland, 1997), or of a dominant class (Olson, 2007). Hjørland (2003) argues strongly for examination of philosophical assumptions through epistemology, “If you do not reflect on your theoretical assumptions, you cannot know if they are adequate and you cannot defend them. ...It is simply a logical mistake to claim that it is possible to disregard philosophical assumptions” (p. 805). He also argues that any theories of knowledge organization are naturally connected to epistemic positions (Hjørland, 2013).

Mai (1999, 2000b, 2004), tracing the shift from universal, scientific-oriented classification to pragmatic, user group-oriented classification, finds that domain analytic approaches (a response to universalist epistemology) will be the future of classification. Thellefsen (2006) described the advent of the domain analytic approach as “a shift in paradigm, from objectivity to relativity” (p. 279). In other words, lest we believe that classifications reflect reality, we rather should look at whose reality it reflects, and how that reality is constructed by the discourses that constitute that reality, and who is being affected by the imposition of a particular epistemic stance, as manifested through classification. Similarly, Hansson (2013) describes that the epistemology underlying classification has remained relatively stable historically, but that the shift from knowledge to information as a product has changed ontology. Olson (2012) attributes the increase of epistemology in knowledge organization research to the recognition and acceptance of cultural difference and cultural knowledge, writing that the “classification community realized that to discuss knowledge is not sufficient. We must also recognize not only diverse epistemic stances; we must each recognize our own epistemic stance” (p. ix). Smiraglia (2012a), too, believes epistemology “is a form of self-reflection about the knowledge we have that allows us, each in our several domains, to build more or less enduring myths about that which we know” (p. 14). Epistemic pluralism also emerged as a common theme. Hjørland (1997, 2004a, 2004b), Smiraglia (2002) and Smiraglia & Lee (2012) recommend using multiple epistemic perspectives, and such works as Kaipainen & Hautamäki (2011) attempt to operationalize pluralism. Thellefsen (2006) believes that semiotics holds the key to reconciling differences in epistemic outlook. The main

problem, in his view, is matching interpretants of the field to interpretants in the system. The answer, he believes, is to reflect the terminology of the domain.

The knowledge organization literature will be organized first by epistemological works, i.e. those that concern the use of epistemological theory, and then loosely by epistemic school of thought. Following the general works will be those that include a feminist or otherwise gendered angle. Although feminist approaches at times could be subsumed in parallel general categories, they will be discussed in their own grouping. While the focus will be on classification, much of the research refers more broadly to knowledge organization systems as a whole, inclusive of classification, thesauri, folksonomies, and ontologies. Since epistemic positions supply a foundation for critical theories and therefore may be mentioned but not featured in articles, only those that focus mainly on epistemology will be mentioned here. Epistemology is comprised of so many nuanced positions that some works catalog the different stances relating to knowledge organization, such as Hjørland and Nicolaisen's *Epistemological Lifeboat* website (<http://www.iva.dk/jni/lifeboat/>) and Budd (2001).

Epistemology in knowledge organization research manifests itself in two ways. One type of paper calls for an epistemological methodology in the study of knowledge organization systems, and the other actually applies the methodology. In the first group, Svenonius (2004) outlines the dominant epistemological theories of meaning that have influenced knowledge organization in the twentieth century. On the objectivist side of the spectrum, she finds operationalism, a theory derived from logical positivism that maintains that statements are only meaningful if they can be empirically verified. She moves to the referential or picture theory, which claims that there is a universal referent

that “contains” all the meanings of that word. Finally, she visits the subjectivist end by describing the instrumental theory of meaning, which holds that every word is a polyseme, or a word with numerous related meanings. Hjørland (1997, 2004a), for example, argues that including different epistemological stances in methodology has better capacity to explain the results of studies. Zins (2004) defines knowledge as used in the field of knowledge organization, starting with Popper’s “worlds 1, 2, and 3” as a foundation. He promotes the use of epistemology in creating scientific knowledge maps. Hansson (2006) recommends the use of an epistemological stance of institutionalism, which marries practical librarianship with the critical approaches. These theories reflect an emerging skepticism of “true,” scientific beliefs, and scientists tend to lean toward Popper’s view that theories are constantly being revised by new theories (Hjørland & Hartel, 2003). Olson & Fox (2010) recommend Gayatri Spivak’s feminist, Marxist, postcolonial approach as a theoretical framework to critically uncover evidence of bias and cultural imperialism in both knowledge organization and library and information studies in general.

Little research attempts to speculate the epistemological stance underpinning existing classification systems. Olson (1994, 1999b) traces the Aristotelian, logical, classical and universal epistemology underlying hierarchical classification. Olson’s (1996) conference paper on a feminist deconstruction of the universalist, Cartesian epistemology underlying *DDC* signified the first feminist epistemology in knowledge organization research, as well as setting off the explosion in epistemological research in general. Ducheyne (2009) examines Paul Otlet’s archives to find his view of knowledge, and finds that Otlet took a humanitarian, cosmological and objective perspective that

questions his previously presumed association with positivism. Researchers studying comparative cultural epistemology in classification (discussed below) typically identify epistemic values of the particular cultural groups in relation to western epistemology. Most often, epistemological research relates to indexing, as vocabulary is easier to identify and change than fundamental, western classificatory structure. Hjørland (2002) and Hjørland & Hartel (2003) provide relevance factors associated with major schools of epistemic thought and applies them to the domain of psychology as it is represented in major databases. In 2013, Hjørland writes that the whole of a field's literature gives insight into the epistemology. Lopez-Huertes (2006) believes that automated indexing can detect "terminological drifting" and determine whether a field has a language of its own or whether what we consider interdisciplinary are actually transdisciplinary. Analyzing the gender studies corpus in Uruguay, Lopez-Huertes found that language of gender studies has "penetrated many disciplines, altering their knowledge structures by creating new concepts and terms, modifying the traditional scientific structure" (p. 336-337). Similarly, Rodriguez Bravo (2006) analyzes three indexing languages for treatment of gendered entries, finding great asymmetry resulting from the treatment of the masculine as the norm.

Olson (1999b, 2004) on the other hand, detects epistemology through structure rather than vocabulary. Some of the problems Olson has identified are the classical, hierarchical structure of classification systems, classification and subject representation as power-wielding tools, and the binary, rigid principles of mutual exclusivity. Smiraglia (2012b) examined the methods used in various domain analytic works to extract the underlying epistemology of domain analysis. Bowker & Star (1999) describe three

classification systems historically and discuss epistemology but do not go so far as to determine a stance. Hjørland (2010) discusses how “Different epistemologies and views of concepts underlie all existing approaches to the construction of [knowledge organization systems]” and that different concept theories “do not produce similar results” (pp. 39-40). He then calls for research into the strengths and weaknesses of each approach, which is one of the aims of this project in the context of gender classification. Hjørland continues an ongoing debate with the phenomena-based epistemic stances endorsed by Szostak and Gnoli; this debate is discussed and documented by Fox (2012a) and argued further, suggesting a more sophisticated approach by Kleineberg (2013), where the knowing subject and the methodology are incorporated along with the epistemology.

Specific Epistemic Stances

Social epistemologies. Traditional epistemology concerns individual ways of knowing, but social epistemology relates to group knowledge and how it is generated and communicated. Social epistemology is both a specific school of thought and a label for common themes that arise regarding the social component of knowing. The paradigmatic belief in intemperate, independent knowledge that “reflects reality” has been destabilized, and tension has arisen from the potential that what was advertised as a natural classification is actually synthetic or anthropogenic. Consequently, much research has focused on how social groups, or groups perceived to be social groups, affect knowledge generation. The term “social epistemology” was coined in LIS when Egan & Shera (1952), defined it as “the study of those processes by which society *as a whole* seeks to achieve a perceptive or understanding relation to the total environment” (p. 132,

emphasis in original). Bliss (1929) and Egan (1956) recognized knowledge organization as inextricable from social structures, and Smiraglia (2014a) describes a type of social epistemology he calls “cultural synergy,” that connects cultural institutions and also empowers them to shape how knowledge is maintained and disseminated. The types of epistemology below refer to the idea that collectives can generate and interpret knowledge similarly.

Standpoint theory. Standpoint is an epistemic stance originating from Marxist theory with the tenet that marginalized groups possess “dual vision” resulting from their situatedness in the margins. In this view, context truly colors knowledge generation and is inclusive of experience and emotion. From their positions, marginalized groups must be able to function within the dominant perspective, as well as within their own groups. In knowledge organization literature, standpoint approaches are best represented by user studies that examine the behaviors of social groups. A limited amount of user studies exist in the literature, but many take standpoint approaches because demographic or cultural groups are the easiest commonality to identify. Fox (2012b) studied social tags to find whether taggers on *LibraryThing* identifying as women or men used language differently. Though the study was preliminary and found little difference between the practices of the groups, suggesting that standpoint may influence the use and evaluation of knowledge organization systems. This approach assumes some sort of physical or cultural sameness, which does not necessarily exist, at least not in demographic categories. In other works, Campbell (2000, 2004) explores the challenges associated with addressing the complicated task of distinguishing “aboutness” from “meaning” in a poststructuralist paradigm as well as the difficulty of providing subject access for

fictional works when meaning loses stability. His specific concern involves identifying implicit gay and lesbian themes in literature not explicitly “about” those topics, and whether it is even possible to classify or index for such themes.

Domain analysis. Domain analytic approaches can be considered social epistemology in that they suggest that a particular group may use language similarly, although that group would be focused around a particular domain rather than demographic characteristic. Smiraglia (2012b) argues that a domain “must be a group with a coherent ontology, which implies a shared epistemology” (p. 111). Hjørland (1997) points out that universal classifications are problematic for their practice of placing a document in one place within a particular discipline. He writes that each document “has several epistemological potentialities that are given priority based on disciplinary viewpoints,” but a universal scheme is forced to choose one (p. 42). Domain analysis is the outcome of the consideration of several epistemological angles. Hjørland argues that theories and concepts are products of particular domains, and that those domains should be analyzed to find them so that they are more easily accessible to the users of the domain. Hjørland & Albrechtsen (1999) argue that the “common knowledge” that social groups share, such as professional, academic or cultural groups, affects how subjects are named, and that to determine the vocabulary and practices of the group, the “domain” must be analyzed and are considered the warrant for inclusion in a system.

One of the benefits of domain analysis is that the vocabulary comes from users themselves, not from cataloging professionals, who may not have appropriate expertise, and indeed, Sauperl’s (2004) research showed that catalogers more often use vocabulary more convenient to the cataloger than usable by searchers. A second benefit is the

creation of systems for specific disciplines or fields, which result from a close analysis of a field and its practices. Though it may seem like domain analysis would cause a proliferation of different systems, Hjørland believes that in the case of indexing, the vocabulary may not be dramatically different between and among domains, but rather the organizational structure of the thesaurus may differ. He often uses the example of chemistry and pharmacy. The domain of chemistry would use many of the same concepts as pharmacy, and the vocabulary would remain the same, but rather the classificatory position would reflect a different emphasis of how the concept is used.

Hjørland & Hartel (2003), in support of the concept of domain analysis, summarize four epistemological approaches that must be addressed in domain analysis in order to capture all aspects of the domain: empiricism, rationalism, historicism and pragmatism, connecting them to the idea that domains, like classification systems, are dynamic and need constant revision. Empiricism relies on lived experience and rationalism uses logic to make *a priori* claims or theoretical models. Historicism, as the name suggests, uses historical developments and context in analysis (p. 240). Hjørland (1992) defines several epistemological positions into which the concept of “subject” can be classified: subjective idealism, pragmatism, and realism/materialism. Understanding the categories will assist knowledge organization specialists in the document description process.

Hjørland places much emphasis on the pragmatic aspects of analysis. Pragmatism attempts to add a practical component to philosophical claims, rejecting the division between theory and practice and the whole concept of metaphysical philosophy. Developed by such scholars as William James, C.S. Pierce and John Dewey, its goal is

tracing hypotheses to their practical consequences. Pragmatism relates to knowledge organization in its notions of meaning. Pragmatists do not believe in a universal reality and that theories are provisional and relative. Practical life and philosophical inquiry are inextricable (Kelly, 2004). Because no universal reality exists, meaning is socially created, placing it among social epistemologies. Concepts are defined in terms of their practical application, or how well they fulfill a specific need, and that function should be included in the structure of classification rather than classifying discrete items hierarchically. Thellefsen, Thellefsen, & Sørensen (2013) view the pragmatic aspect of knowledge organization as cognitively creating beliefs where there was once doubt. Hjørland (2009) admits that despite the impressive algorithms that have been created by search engines, context still easily gets lost. However, he trusts that information technology and information science classification specialists will eventually be able to include context in searching. Gallagher (1991) and Mai (2000b) describe the concepts of likeness with a pragmatic approach, and Jacob (2000) addresses postmodern criticisms of classification theory by suggesting a pragmatic understanding of knowledge. Dousa (2010) describes the differences between classical pragmatism and neopragmatism and the benefits of each in the context of knowledge organization.

Wittgenstein/mentalism. Because of his ideas about meaning and language, Wittgenstein is often cited in knowledge organization literature. Although his oeuvre is diverse and evolved throughout his career, his theory of language and his revisions of his own theory significantly relate to knowledge organization in several places on the epistemological continuum. He rejects the claim that language consists only of words that represent objects. Language can only be understood in the context that it is being used,

and each context makes up a nebulous concept that he calls a language-game. Language games, although never clearly defined, relate to the idea that meaning is made in context, and fields all have their own context and play (Kelly, 2004, pp. 127-8). His discussion of family resemblance often is used in formulating definitions of “works” and “texts.” Beghtol (1986a) analyzed bibliographic classification theory in terms of mentalism. Christensen’s (2000) investigation of scientific discourse houses its semiotic analysis in Wittgenstein’s language games. Blair (1990), in his monograph *Language and Representation in Information Retrieval*, Hjørland (1998) and Frohmann (1990, 2004) use Wittgenstein’s language-games ideas to frame their definitions of the document and information in the context of information retrieval. Fox (2011) uses family resemblance as a framework for gender classification and Saldahna (2014) compares the theories of Wittgenstein with the Indian classificationist Ranganathan to show how pragmatics shaped their notions of language and knowledge organization.

Individualist epistemologies.

Cognitive science. Cognitive science studies the connection between intellect and the mind across many contexts, and it includes various disciplines such as education, philosophy, linguistics, psychology, and anthropology, as well as neuroscience and artificial intelligence. For knowledge organization, relevant inquiries of cognitive science include such questions as whether the brain has its own visual code or language when it thinks, how representations gain meaning, and if that meaning relates to the individual or the community (Thagard, 2010). Beghtol (1986a) applies the textual linguistic theories of van Dijk to bibliographic classification theory, using his ideas to define “aboutness.” Research from this area that has influenced knowledge organization is George Lakoff’s (1987) *Women, Fire and Dangerous Things*, which questions knowledge as abstract and

disembodied, and argues that categories are not uniform or transcendent of individual experience, but rather depend on the experience and cultural grounding of the knower. Lakoff calls his view “experiential realism,” which falls epistemologically between classical, universal views and the postmodern in that it assumes a stable reality exists. However, people’s experience of reality is based on their cultural context and physical beings. Tennis (2005, 2008) uses the experiential epistemology of Lakoff to enhance domain analysis. Farrow (1991, 1994, 1996) applies a psycholinguistic view to the acts of indexing, abstracting and classifying. Jacob & Shaw (1998) and Jacob (2004) bring the concept of cognitive scaffolding to classification. Campbell (2010) uses the linguistic theories of Ricoeur to frame his discussion of local and universal knowledge. Fox (2011) uses prototype theory, a linguistic theory of categorization, as a potential framework for classifying sex and gender.

Structuralism/deconstruction/poststructuralism. Structuralism and poststructuralism provide a popular context for knowledge organization researchers because of the subjectivist stance that no unchanging, universal reality exists. Though cognitive approaches are also individual, they are more empirically based. Originating with the semiotic principles conceptualized by Saussure, structuralism analyzes literary or cultural texts as signifying units (rather than working at the sentence or word level, as in semiotics). A signifying unit could be a myth, a literary work, a painting, a fashion trend or any other cultural product, including a classification system. Many of the same major figures from semiotics evolved their views toward structuralism, such as Barthes, Jakobson, Levi-Strauss, Todorov, Genette and Greimas. Poststructuralists challenged the notion that an author affixed set meanings into a text and believed that readers create

meaning themselves. Deconstruction, a method of poststructuralism, popularized in the 1970's, was Jacques Derrida's response to what he perceived as major flaws in structuralism. Barthes, too, evolved toward poststructuralism with his "The Death of the Author" (1967), and along with Derrida, major theorists include Foucault and Kristeva.

Foucault's critiques of institutions (medicine, psychiatry, schools, prisons) and the documentation that defines their practices (medical charts, exams) constitute a socio-historical critique of power, which makes his work a worthy framework for examining the library as a cultural institution. He is the most commonly cited structuralist/poststructuralist in LIS literature, but less frequently in knowledge organization literature. Foucault's wide range of writings and his ideas about representation, language, and truth make him a useful referent across a variety of disciplines. Hannabuss (1996) provides a detailed overview of Foucault's notions about warranted knowledge and then argues that these concepts were critical for information professionals to understand. Olson (1997; 2002) describes and advocates using the process of deconstruction, but with a feminist bent. She then uses a Foucauldian discourse analysis to uncover assumptions in classical logic (Olson, 1999b). Campbell (2005; 2007) uses a structuralist approach to representation, and later compares the evolution of the paradigm shifts within knowledge organization to Foucault's analysis of the evolution of clinics. Frohmann (1992; 1994a, 1994c; 2001) applies the theories of Foucault to research and pedagogy. Adler (2012, 2015) uses Foucauldian frameworks to analyze the Library of Congress's role in creating knowledge. Moulaison, Dykas, & Budd (2013) examine how authors are treated in descriptive cataloging, specifically in RDA, applying Foucault's concept of the author-function.

In other applications of poststructuralism, Jacob & Albrechtsen (1999) and Jacob (2004) apply elements of poststructuralism to discussion of classification and classificatory structures. Andersen (2002) and Paling (2004), apply Genette's concept of paratexts, or extratextual materials such as tables of content and bibliographic records, and how they affect interpretation and meaning of the text. Shapiro (2002) suggests that a cultural symbol thesaurus could be developed that contains symbols across many fields, and Tredinnick (2007) relates poststructuralism to the idea of hypertext. Fox & Reece (2013) apply Derrida's deconstructed notion of "hospitality" to social tagging. Samuelsson (2010) sees knowledge organization systems as discourses made up of words that reflect power relationships and shape meanings in external reality. Because the knowledge organization systems poorly "articulate" feminist perspectives, they are rendered invisible in external reality. Also, because of the context specificity of word meanings, she believes that domain-centric knowledge organization systems, such as those for feminist topics, should be used rather than universal systems. Olson (1999a, 2000) and Bednereks (2007) both use the postcolonial concept of the Third Space to describe how *LCSH* serves as a translation of the meanings of works.

Feminist epistemology in knowledge organization. As mentioned above, Olson and Fox (2010) recommend Gayatri Spivak's feminist, Marxist, poststructuralist, postcolonial approach as a theoretical framework, and then Fox & Olson (2012) summarize the spectrum of feminist epistemic approaches and describe potential applications in knowledge organization. Olson & Fox (2013) also discuss the use of the feminist ethic of care in knowledge organization contexts. As the groundbreaking scholar of feminist epistemology in knowledge organization, Olson explicitly uses feminist

theory, often feminist deconstruction, in critiquing standards and subject access. Olson (1996) uses the poststructural epistemologies of Cornell and Nye to critique the oppositional concepts and structure underlying hierarchical classifications. She recommends feminist deconstruction as a research method (1997), uses feminist deconstruction on LIS discourse (1995; 2002), and analyzes the epistemic assumptions underlying classical logic (1999b, 2007). She continues her feminist epistemological approach in 2010, analyzing Hegel's epistemic structure—which influenced *DDC*—through the lens of Spivak, arguing that his conceptions of knowledge marginalize non-Western and feminine cultures.

Feinberg (2007) uses the “situated knowledges” epistemology of Haraway to support her concept of “responsible bias.” Tennis (2012a), critiquing standpoint approaches, uses Olson's work and the feminist epistemology of radical feminist Mary Daly, using examples from her *Wickedary* dictionary to illustrate how feminism rejects patriarchal assumptions of universality (despite Daly being an essentialist). He addresses the perennial question of usefulness versus accuracy, concluding that the field should focus on creating useful rather than “correct” classifications. Samuelsson (2010), though not strictly applying feminist epistemology, uses discourse analysis to explore the difficulty of representing literature on feminist topics. Alexander (2012, 2014) applies feminist empiricist Longino's theories to analyze the development of knowledge and language in taxonomic work.

Non-western and indigenous epistemologies. A slice of the knowledge organization literature focuses on comparative epistemology in classification, describing how non-western or indigenous epistemologies influence the associated knowledge

structures and what western classification could learn from other perspectives. Olson (1999a) proposes indigenous knowledge structures to those of classical Western structures. Lee (2010, 2012a, 2012b) and Lee & Lan (2009, 2011) examine the epistemic values of ancient Chinese catalogers in their investigations of the first classified catalog, the *Seven Epitomes*. Lee (2012b) writes that social epistemology “resonates with traditional Chinese holistic thinking” (p. 67). Maina (2012) describes the indigenous epistemology of the First Nations communities in Canada and how librarians need to develop cultural competency with the characteristics of native knowledge and organization practices. Lee (2006) also takes a comparative approach in her investigation of how American and Taiwanese student search using knowledge organization systems. The epistemic assumption would be that the cultural groups have collective knowledge that causes them to search similarly. Neelameghan & Raghavan (2012) describe the nuances of the epistemic foundations including notions of time, knowledge authorities and conceptual relationships underlying several schools of Indian philosophical thought and the effect on both Ranganathan’s and western knowledge organization systems.

Feminist, Transgender and Intersex Literature on the Definition of Gender

Several overlapping debates, both implicitly and explicitly epistemic, persist within feminist and gender literature. The continuing debate of the essential or anti-essential nature of woman, which is a metaphysical and ontological concern, will be loosely mapped on top of the rough categories of universalism, standpoint, and postmodernist epistemological viewpoints. Though the history and evolution of feminist categories are far more nuanced than is able to be presented here, the major shifts in thinking will be covered, insofar as they are relevant to my methodology. A growing

body of literature explores the historical and contemporary medical reactions to intersex phenomena.

Feminist classifications of gender

For most of history, gender and sex were synonymous, with gender referring only linguistically to masculine and feminine words. Prior to the use of the term “gender,” Mead (1949), in her classic anthropological study *Male and Female*, describes sexual difference from her perspective as a cultural anthropologist, recognizing societal pressure on the sexes that breaks down the notion of biological influence. Along with her other studies, *Sex and Temperament in Three Primitive Societies* (1935) and *Coming of Age in Samoa* (1928), upended the supposed “naturalness” of a male-dominated society and introduced the notion of cultural constructivism. Her work garnered criticism for its methods and conclusions, but helped to establish the idea of the social construction of gender (without using the term as it is used today). In their research on transsexuality in the 1950s and 60s, psychiatrist David Cauldwell (1949) and psychologist Robert Stoller began distinguishing sex from gender to explain how people could feel mismatched from the sex of their bodies. Psychologist/sexologist John Money (1955) coined the terms “gender” and “gender identity” around that time.

For the most part, in the early years of the second wave feminist movement, feminists generally accepted the notion of two separate sexes, but critiqued the “sex-gender system,” or what Rubin (1975) described as a culture’s way of using certain facts about biological sex to derive a set of social identities and behaviors (i.e. gender). In other words, sexed bodies exist as a sort of palette upon which gender is constructed. Sex does not change, but gender is mutable. Versions of this view, lumped under “gender realism” have persisted, but not without serious criticism. Spelman (1988), Harris (1990)

and Stone (2007) all critique this view, arguing that no commonality connects all women across time and place. Radicals such as Firestone (1970) believe that the family structure—most notably reproduction and childrearing—was the root of women’s oppression and suggested that if reproduction could occur artificially outside the body, sexism would end. Meyerowitz (2008) argues that once the term “gender” was proclaimed to be artificial, then it was rejected by women because it is detrimental to retain a term that smacked of oppression.

The concept of physical bodies and sexual difference, i.e. “sex,” has also come under scrutiny in feminist literature, where the assumption of dimorphism has been questioned (Blackless, et al., 2000). Medical-scientific literature looks more at physical attributes of sex organs, coming to the conclusion that sex dimorphism is not as clear cut as most people popularly believe. Dreger (1998a; 1998b) describes the medical history, treatment, and interpretation of the sexuality of intersex individuals beginning in the mid-nineteenth century. Fausto-Sterling (2000) argues that sex has become an obsessional foundation to gender roles, but since the brain changes over time, any effort to attribute sex difference to hormones is undermined by cultural influences on brain development. Roberts (2000) recommends that the paradigmatic binary of social/biological be rethought in order to more thoughtfully address scientific claims of biological determinism. She suggests an “interimplication” approach to considering biology and social interactions and outcomes.

Hester (2004) writes that, with a few exceptions, feminist and queer literature involving intersex or trans people de-emphasize the importance and agency of sexed bodies, preferring to focus on the political (p. 220). Hester provides a clear discussion of

how the binary sex paradigm appeared and was maintained in medical science, and medicine's role in both acknowledging "a dizzying variety of sexes available," as well as attempting to "eliminate the causes of variation and to intervene with surgical, endocrine and psychosocial methods to control the bodies of intersexed people" (p. 218). He critiques the conclusions of those who assert gender's prevalence over sex, such as Kessler & McKenna (1978) or Fausto-Sterling (2000) because he believes their inclusion of desire requires a stable sex, and that sex, physiologically speaking, is not stable or even classifiable. He believes a "postgender" outlook would provide more subjectivity for bodies of ambiguous sex, rather than having a passive body on which culture ascribes its influence. He believes society needs to shake the need to "have a sex" (2004, p. 222).

Though intersexuality, or non-dimorphic sex, was medically recognized and documented since at least the mid-nineteenth century (Dreger 1998a; 1998b), Garfinkel's (1967) ethnomethodological study uncovered a "natural attitude" that exemplified society's view of sex, despite medical evidence. What came to be known as "Garfinkel's rules" have been a point of frustration for transgender and intersex people:

1. Society is populated by two and only two sexes;
2. The dichotomy of sex is morally legitimate;
3. Everyone counts themselves as a member of one sex or the other;
4. All members are invariantly (i.e. 'always have been, and always will be') either male or female;
5. The essential identifying 'insignia' for males is the possession of a penis and for females a vagina;

6. People will not willfully or randomly transfer from one sex status to another; and
7. In the case of ‘ambiguous’ individuals whose sex status is not immediately obvious, it should still be possible, in principle, to classify them as either male or female. (pp. 122-128)

The rules reflected the opinions of society rather than Garfinkel himself, who gathered the data. Speer (2005), following Kessler & McKenna’s (1978) formulation of the “gender attribution process,” or “the methodical procedures through which members come to identify others as male or female” (p. 67), describes her study where participants attempted to assign gender to images of ambiguous gender. In her study, she finds that when unclear, participants resorted to Garfinkel’s rules to disambiguate.

Transgenderism and intersexuality

Though trans and intersex people share the broad commonality of challenging the binary norms, they have distinct concerns that at times can be subsumed or overlooked. Members of each community disagree on whom best to ally with—lesbians and gays, feminists, disability advocates (for intersex), or each other (Greenberg, 2012), and in some cases, open animosity existed, such between radical feminists and transsexuals. For example, Raymond (2006) asserted in the 1970s that MTF transsexuals were more or less mutilated men who pretend to challenge gender norms but actually reinforce them (p. 132). Transgenderism, newly renamed “gender dysphoria” in the most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* (2012), is an umbrella term that includes a range anywhere from transsexuals who may have had hormone therapy or surgery to people who simply cross-dress. The definition refers to a persistent discomfort with one’s assigned gender and identification with the gender opposite of the

assigned or living gender. This group generally is concerned with being allowed to live in their desired gender without discrimination or violence and began to organize around the 1970s, but most effectively in the 1990s (Greenberg, Herald & Strasser, 2010, p. 13).

Garber (1991) has said that transgenderism caused a “category crisis” (p. 16). Consequently, research on trans and intersex issues, more than any other related literature, focuses on formal gender classification, where categories cannot blur. The legal literature, in particular, has emerged most recently because the status of trans people in public life require a legal resolution, such as in use of restrooms, inmate grouping, right-to-marriage, sexual harassment (Alemzadeh, 2013) and identity document information that require a legal definition (Spade, 2008, 2011). Storrow (1997) describes how the courts grappled with the inconsistency of allowing gender to change for transsexuals with and without surgery. Holt (1997) and Kelly (2010) describe the precarity of transgender rights in employment discrimination. Allen (2008) compares the UK’s Gender Recognition Act to the US’s Real ID Act, both of which provide the state’s standards for “proving” gender. Lloyd (2005) applies Butler to analyze how legal rhetoric dehumanizes transgender individuals. Similarly, Taniguchi (2013) critiques the Gender Identity Disorder Act, which serves a similar purpose in Japan. George (2006) compares the legal status of intersex people to mulattos in the antebellum south, as does Ezie (2011). Gilden (2008) describes the fluid, Navaho “berdache” [term used in the article] model of gender relative to its potential to use for transgender legal classification. Faithfull (2009) outlines how the Prison Rape Elimination Act classifies transgendered inmates in relation to their likelihood to provoke sexual abuse by other inmates and prison staff. Faithfull (2010) questions how the rigidity of legal categories can accommodate “dynamic gender

performance” and “complex ways of existing” (p. 457). Nye (1998) has examined transgender jurisprudence, and Meadow (2010) has compared 38 juridical gender determinations 1967 and 2007, seeking the criteria the courts used to determine sex when a litigant was transgender. Meadow found that three purposes for classification were found: 1) sex as a personality trait meant for purposes such as identification; 2) as a “characteristic of gendered relationships” such as for same-sex marriage or parental relationships; and 3) power structures, such as in employment situations (p. 822). Kirkland (2003), has examined case law for medical necessity of sex reassignment surgeries. Ballard (2012) discusses the US State Department’s policies for gender on passports, and proposes using gender classification recommendations from the World Professional Association for Transgender Health to help form policy. Harris (2010) and Franson (2013) recommend that schools reexamine their dress code policies to help reduce bullying of transgender students. Enriquez (2013) critiques the standard of immutable identity characteristics by the court, arguing that characteristics such as sex and gender can change after birth. Mottet’s (2013) comprehensive article outlines the status of birth certificate change, comparing it to other countries’ policies and laying out the ramifications to the law. Ziegler & Huntley (2013) critique the NCAA’s 2011 policy on transgender and intersex athletes, and compare it to other governing bodies’ policies, such as the International Olympic Committee’s.

Much of the literature on transgender concerns, academic, legal, and popular, such as Vade (2005), Morgan & Stevens (2008) and Meadow (2010) includes testimonial to counteract the epistemic objectivity of scientific assignment of sex with subjectivity, at times employing unconventional writing methods within academic works, in order to

escape the strictures of dominant discourse (cf. Nye 1998; Ohle 2004). Testimonial has almost become conventional, as it most effectively works to gain empathy for those whose experience is beyond one's own lived experience. Influential transgender testimonials emerging in the popular press, such as Kate Bornstein's (1994) *Gender Outlaw: Men, Women, and the Rest of Us*, were ground-breaking in that they provided perspective from those who did not identify as one of the two genders. For example, Bornstein writes, "I know I'm not a man...and I've come to the conclusion that I'm probably not a woman either...The trouble is, we're living in a world that insists we be one or the other—a world that doesn't bother to tell us exactly what one or the other *is*" (p. 8). Similarly, the literature often invokes Butler's notion of performativity, a poststructural theory described below that is considered a foundation of queer theory because it mostly divorces sex from gender. Though all of intersex and transgender literature cannot be covered, it is important to the classification of gender insofar as the stability of sex and binary gender are less certain than the attitudes expressed by Garfinkel's sample. Ultimately, this set of literature attempts to give epistemic agency to those who have been denied it.

Epistemology and Metaphysics in Gender Classification

The most ubiquitous and foundational concern in the classification of gender involves essentialism, or the belief that necessary and sufficient essential characteristics define concepts. Though essentialism constitutes a metaphysical more than epistemological concern, the underlying mutability or immutability of concepts suggests particular epistemic outlooks. Metaphysical-realist views of essentialism assume that a reality exists separate from human cognition, which also then requires an epistemology friendly to universal knowledge. Whether this knowledge can actually be known by

humans varies by viewpoints, which originate from the philosophy of science, linguistics, literary theory and others. Major contributors include Wittgenstein, Quine, Davidson, Putnam, Goodman and Derrida (Nussbaum, 1992, p. 207). Essentialism here will only be addressed in terms of gender classification, as a vast body of literature exists in philosophy arguing the relative merits and problems of essentialism in terms of all existence, not just gender.

Classic essentialists. Positions that subscribe to essentialism are considered “gender realism” and generally accept absolute divisions of gender, or that all women share a common experience, characteristic or other criterion that differentiates them from all men, regardless of the identities they claim. Early studies took on the nature/nurture debate (cf. Tuana, 1983; Purdy, 1986), but the peak was the 1990s, with literature emerging from a multitude of fields. Mikkola (2006; 2009), arguing for gender realism, believes that “intuitive” definitions of “woman” are more powerful. Grosz (1994) describes the nuance between the gender realist views, including universalism, biologism and naturalism. She describes essentialism’s role in feminist thought: “Essentialism, a term that is rarely defined or explained explicitly in feminist contexts, refers to the attribution of a fixed essence to women. Women’s essence is assumed to be given and universal and is usually, though not necessarily, identified with women's biological or “natural” characteristics. ... nurturance, empathy, supportiveness, non-competitiveness, and so on (p. 84). The concept of woman, then, would include a set of characteristics that would be common to all women, across time and place, thus requiring belief in a universalist epistemology. Martin (1994) attributes the troublesome nature of essentialism to a transition in philosophy from naming the essence of “things” (*de re*) to the essence of

linguistic expressions (*de dicto*) (p. 632). The result is that essences are then applied to the whole of the linguistic category rather than individual members.

Classic essentialists include Marilyn Frye, legal scholar Catherine McKinnon, radical Mary Daly, feminist poet Adrienne Rich, and more recently, Rosi Braidotti and Tanya Modleski. Other pseudo-essentialist views include psychoanalytic and care feminisms such as those of Gilligan (1988), Hekman (1995), Tronto (1994) Noddings (2003), Flax (1990) and Chodorow (1995). Psychoanalytic feminisms attempt to strike the balance between essentialism and constructivism, yet they dissolve into essentialism by creating psychological essentialism originating in early childhood. In psychoanalytic feminism, gender identity is formed in the mind shortly after birth. Similarly psychologist Sandra Bem (1981) found the same phenomenon, but attributed gendered behavior to cognitive response to pervasive “gender schema” that children encounter as they develop.

Revisionist essentialisms. Those involved in the essentialism debate somewhat agree that language forces people to essentialize, but the bigger question is the nature of essences. Though many resist the notion that all women have a common essence, the overriding difficulty of rejecting an essentialist viewpoint is that without it, there is no category “Woman.” According to Schor (1994), the question that allows essentialism to continue is “can there be a feminist politics that dispenses with the notion of Woman?” (p. xiii). Without it, those who argue for women’s rights would not have an organizing category to gain political traction, and more practically, protection, such as Down’s (1993) article, “If ‘Woman’ is Just an Empty Category, Then Why am I Afraid to Walk Alone at Night?” Those who reject the possibility of losing “woman” as a unit of analysis, but are unwilling to accept eternal, immutable Aristotelian essences, have tinkered with

the concept of essences and the definition of essentialism. Some choose Lockian essences that are provisional and nominal, using such terms as “strategic” or “tactical,” essentialism (Spivak, 1988 and recanted 1993; Carr, 1993; Bordo, 1990; de Laurentis 1994), including Irigaray’s (1985) concept of “mimesis” or a reflective consideration of stereotypes of women, with the intention of “jamming the theoretical machinery,” by questioning those views (p. 78).

While most feminists do not advocate for the Aristotelian, metaphysical divide of essence/accident, those who do fall on the essentialist side argue for a more sophisticated understanding of essentialism or a specific type of essentialism, or at the least argue that no resolution exists so we all might as well get over it. Millett (1971) believes in essential gender roles, but that they are socially constructed. Women are conditioned into their subordinate roles, which perpetuate themselves because they are reinforced by society. However, the roles can be resisted as women change cultures perceptions of women and undermine the traditional views. De Laurentis (1987) shifts the focus from the difference between man and woman, to the differences in the definition of woman, writing that “the sex-gender system...is both a sociocultural construct and a semiotic apparatus” (p. 5). Fuss (1989) like Millett and others, takes a social view of essentialism in that she sees social constructivism as a complex interweaving of different essentialisms. She advocates for pluralizing essentialism, questioning whether “nature and fixity go together (naturally), just as sociality and change go together (naturally)” (p. 6). She critiques both Lacan’s psychoanalytical and Derrida’s deconstructionist attempts to “transcend” essentialism, finding that essentialist assumptions underlie their antiessentialist arguments.

Nussbaum (1992) describes what she calls “internalist” essentialism, which she finds to be more defensible than the “externalist” metaphysical variety. She argues that an internalist account needs to be able to include historical and cultural differences, autonomy (to combat essentialist determinism), and avoid “prejudicial application” (pp. 208-209). Her objection to extreme subjectivism is that without some sort of anchoring force, those without power are left to the market of social forces, which “are rarely benign” (p. 212). She restricts her non-metaphysical conceptualization to “actual self-interpretations and self-evaluations of human beings in history,” sticking to the “broadly shared general consensus” of human life, such as mortality, bodily needs, capacity for pleasure and pain, cognitive ability, reason, humor, and others (pp. 215-220). The broad categories are class-, religion- and gender-free in order to maintain an equal distribution of goods, but it retains the Aristotelian sense of free will so that those who disagree with anything set forth by public policy are free to take or leave it. Similarly, Irigaray (1994), who is often cited as an example of an essentialist, advocates for separatism different from those of radical feminists—one that creates a community of women to separate them from men in order to find “the necessary condition for their identity,” formed without patriarchal influence seeping in (p. 75).

Following in the tradition of Nussbaum, Sveinsdottir (2008) describes her own view of anti-realist “conferralist essentialism,” which accepts essential properties, but maintains that those properties are “conferred” by experts. Witt (2011; 2012) argues for “unification essentialism,” or “uniessentialism,” which she distinguishes from traditional views of essentialism by describing essence as social rather than biological. Essence, then, relates to socially ascribed norms which exist whether one is receptive to them or not,

making gender a “principle of normative unity,” or “a functional essence, the socially recognized engendering function (or the gender) unifies a heap of social role occupancies into an individual, a social individual (Witt, 2012, p. 8).

Standpoint theory. Turning back to epistemology, standpoint epistemologists accept women as a group, and accept that some kind of commonality exists with the group because of their experience of being oppressed, not necessarily because of biology. Harding (1983) first proposed standpoint as a new epistemology to undermine the sex/gender system as described by Rubin (1975), arguing that empiricist, scientific epistemology promotes knowledge as a “true belief about reality.” As Jagger (2004) puts it, the pain caused by a ruling group “provides [the oppressed group] with motivation for...criticizing accepted interpretations of reality, and for developing new and less distorted ways of understanding the world” and can be considered “epistemologically advantageous” (p. 56-57). Though with slightly different takes, well-known theorists include Harding (1983; 1991), Hill Collins (1990), Hartsock (1995), and Haraway (1991).

Reactions to essentialism. Many scholars have had forceful reactions to works that even hinted of essentialism. Spivak (1993) laments that anti-essentialism led women “to call names and to congratulate ourselves” (p. 157), and Martin (1994) attributed the argument to a “chilly research climate” (p. 630). Schor (1994) writes that anti-essentialist literature is that of “sarcasm, cold fury, and contempt” (p. vii). Though some argue the oxymoronic nature of anti-essential feminism, many believe that women benefit more from being judged as individuals rather than collectively. Analytic and continental traditions both critique essentialist or “falsely universalized conceptions of women,” but originate from different frameworks (Warnke, 2012). Analytic works tend to be Anglo-

American approaches based on language or political theory, and continental works look to European theorists. Postmodern thinkers in general deny that any overarching universal reality exists, but rather reality is rooted in individual perspectives.

Postmodernist epistemology

In academic literature, much of the challenge to rigid sex and gender categories arose with structural, poststructural, and postmodern thinkers. These thinkers challenged not only conceptual essentialism, but also the dominant notions that unchanging, fundamental principles underpinned knowledge and existence, and that the noblest pursuit for scholars was to uncover these transcendent principles. Particularly in the field of philosophy, with social sciences also following suit, the “god’s eye view” was and still is considered ideal, only to be challenged by groups with a “perspective,” such as feminists, Marxists, and black and gay liberation scholars (Nicholson, 1990, pp. 2-3). The ongoing concern for postmodern scholars was that to define woman was to reify, and to reify is to subjugate. As Nicholson (1998) puts it, a fixed definition of woman “operates as a policing force which generates and legitimizes certain practices, experiences, etc., and curtails and delegitimizes others” (p. 293). But without a solid definition, no way to unite for political purposes exists, thus leading to such ideas as “strategic” or “provisional” essentialism. Fraser & Nicholson (1990) argue, “A postmodern reflection on feminist theory reveals disabling vestiges of essentialism while a feminist reflection on postmodernist reveals androcentrism and political naïveté” (p. 20). For this reason, feminism and postmodernism have a fraught but vital relationship. The most valuable contribution of postmodernism to feminism was to help call out the white, middle-class assumptions that dominated early feminist thought, leading to the emergence of intersectionality. As Haslanger (2000) points out, most provisional

definitions of gender reflect characteristics of middle-class white women. Hartsock (1990) argues that postmodernist theories most often critique universalist viewpoints “without putting anything in their place” and finds postmodernism “dangerous” for marginalized groups (p. 159).

A hodgepodge of other works attempt to sidestep or explain the debate. Harding and Hintikka’s (1983) collection *Discovering Reality* includes chapters on feminist epistemology, metaphysics, philosophy of science and methodology, all of which overlap. Chapters relevant to gender classification include Flax’s essay on how the patriarchy has infiltrated seemingly neutral knowledge claims, Fox Keller’s description of how scientific objectivity is equated with a masculine viewpoint and the consequent effect on gender identity, and Harding’s “Why has the Sex/Gender System Become Visible only Now?”, and an assortment of essays critiquing Aristotelian essentialism (cf. Spelman; Lange). In other works, Barker (1997) blames Aristotelian metaphysics for linking definition to essence. In other words, metaphysical definitions cannot be provisional, as the conditions outlined are immutable. She then argues for using discursivity rather than metaphysical definitions. Gilbert (2009) argues to “defeat bigenderism,” first describing how ingrained the two-gender system is, then defining different levels of application and demonstrating how value gets applied to masculine or feminine traits. Finally, she proposes several models of genderism ranging from “strict bigenderism” to an ideal, but likely unattainable, “non-genderism” that includes no gender demarcation or value judgments. Butler (1999) famously has argued for the theory of performativity—i.e. that gender is a performance, with certain constraints. She “sought to undermine any and all efforts to wield a discourse of truth to delegitimize minority gendered and sexual

practices” (p. 7). She writes that gender performativity is a type of “enactment,” and that “the ‘appearance’ of gender is often mistaken as a sign of its internal or inherent truth” (2009, p. i). The constraints are caused by the condition of “precarity,” or the physical danger that accompanies not submitting to societal gender roles (p. ii). Morris (1995) describes performativity’s effect on anthropology, as sexed bodies have gained the ability to be manipulated through surgery.

Middle ways: Concept theory, discursivity, and positionality.

The stifling nature of the essentialism/antiessentialism universal/postmodern debates led many scholars to seek a middle ground, either by reluctant acceptance, such as through “strategic essentialism” or by attempting to find ways around it, usually by changing the unit of analysis or by changing the concept of a concept. Scott (1988) argues that methodologically, historians should analyze “gender” discursively in order to recognize how much representation and culture are involved in shaping the “definition” of women. Though not without controversy, Scott helped transform women’s history from a study of demographic groups to studies of representation (Meyerowitz, 2008). Barker (1997) also argues that terms such as “woman” and “feminine” should be defined discursively, following the traditions of Foucault and Derrida rather than metaphysically, with the belief that it would minimize the essentialism debate. She argues that the link between definition and essence fuels the debate. Similarly, Haslanger (2000) asks to look at concepts first before deciding how something is defined. She suggests that terms should be defined pragmatically to meet political ends. Goldenberg (2007) argues that categories of sameness do not work when constructing gender categories. She proposes a “new categorical logic” that works from difference rather than sameness as dictated by

Aristotelian set theory. This would permit the category “woman” to be inclusive of the individualism and exceptionalism disallowed by essentialist constructs.

Gender nominalism, which follows the tradition of Wittgenstein’s family resemblance, argues that an array of features exist that can signal “woman,” but none are necessary and sufficient to group membership (Spelman, 1988; Fisher, 1992; Hale, 1996; Davidson & Smith, 1999; Fox, 2011). In a different take, Alcoff (1988) praises de Lauretis’s method of interpreting gender through “concrete habits, practices, and discourses, while at the same time recognizing the fluidity of these” (p. 450). She believes feminine subjectivity should be understood in the moment and place it is construed, without generalizing from that instant. Rather than being associated with other women through a constellation of common traits, such as in gender nominalism, (which she overtly objects to), Alcoff believes “positionality,” or constantly shifting context, defines women. Women have influence on perceptions of them, and can work to change phallogocentric constructions of women. She writes, “the position that women find themselves in can be actively utilized as a location for the construction of meaning, a place from where meaning is constructed, rather than simply the place where a meaning can be discovered (the meaning of femaleness)” (p. 452). Positionality is not the only theory to occupy the middle road between essentialism and nominalism. Other feminisms define gender as those who share common conditions, such as submission or oppression (MacKinnon, 1987; Haslanger, 2000) or reproductive capacity (Firestone, 1970, Landweer, 2005).

Conclusion

As demonstrated above, copious research has been done in a multitude of fields on the concept of “woman.” Most are looking for a way to provide flexibility in the definition without losing the unifying structure that provides political power and protection, while others argue that the unifying structure causes oppression in the first place. This is all accomplished through tinkering with the metaphysical, legal, linguistic or cognitive impressions of gender. The epistemic uncertainty puts into question collectivity of women as a group, women’s knowledge or ways of knowing, and women’s relationship to men, individualism, and other concerns. Is it even possible for gender classification to retain “woman” as a unit of analysis, without being encumbered by centuries of baggage? Furthermore, should “woman” still exist as a unit of analysis given the diversity of sexes and genders increasingly being acknowledged and legitimated? The themes evident across the literature show that most often, gender classification is critiqued in terms of cognitive perception or metaphysics rather than in legal or formal classifications, unless referring to transgenderism.

However, where theory ends, practice begins in knowledge organization. In knowledge organization, the paradigm is tipping, though has not fully shifted, toward a more postmodern approach. Thus far, the angle tends to be analytical rather than operational, following Hartsock’s (1990) estimation that postmodern theory is limited to critique rather than construction. Despite the increase in identified epistemic frameworks, much opportunity remains to both operationalize the theoretical discussions of epistemology and analyze the epistemology of existing KOS’s. The literature shows that while a range of epistemic stances has been explored, most often it remains just that:

exploration. The research tends to show, with rare exceptions, “one-hit wonder” works, with few or no others expanding on the original explorations. Little work involves user perceptions of classifications. In chapter 6, the perspective is reversed to identify and critique the epistemolog(ies) already at play, rather than finding a new lens through which to critique the existing classifications. The reactions, perceptions and treatment of passers-by on the street, co-workers, and family members are fundamental to how gender of any stripe is perceived and treated, and they work in tandem with formal, sanctioned classifications that are the apparatuses of law and the state to regulate behavior. Next, I will look critically at how these ingredients discursively interact to construct gender classifications. A description of the methodology appears in the next chapter.

Chapter 3: Methodology

The gaps in the knowledge organization literature and the tendency for gender studies research to linger in metaphysics show a need to examine the epistemology behind formal classifications of gender. Though trans and intersex literature focus on formal classifications, epistemology only occasionally gets evoked. Historically, marginalized groups have been left out of defining themselves and have been defined by others. Epistemic analysis exposes how much agency is allowed in the knowing subject and the known object. As mentioned previously, Hjørland (2010) endorses the analysis of various epistemic approaches behind specific classifications as a crucial research question for knowledge organization researchers, as it helps reveal whose perspective is being privileged in the generation of knowledge structures ultimately imposed upon others.

Undercurrents of power tacitly lurk in classification, which have historically reflected the values and teleological force in the culture, discipline, or institution from which they originate. Foucault argues that resistance is a type of power. Gendered bodies, as known objects, can be loci of resistance for gender categories. Feminist, trans and intersex literature demonstrate resistance to the often unnamed “power” that places people, by gender, into categories. A perfect classification may be impossible, but a goal is to make the most useful classification that results in the least conceptual violence (Fox & Reece, 2012). And, as scholars such as Bowker & Star (1999), de la tierra (2008), Greenblatt (1990) and the authors of the large body of trans and intersex literature have pointed out, classifications, including library classifications, have very real consequences to those using them that can result in physical, legal, medical, social, or psychological ramifications. Thus, this part of the dissertation entails first the identification of epistemic

outlook and then the strengths and weaknesses of the identified approach and how they potentially contribute to the ramifications above.

The methodological framework for this project is a critical theory approach. Critical theory is both a specific school of thought within the social sciences and a broader philosophical methodology. In its original iteration, the Critical Theorists were a 1930's era group of German scholars known as the Frankfurt School who believed that theory could not be derived independently from historical and social contexts. Furthermore, theories, as products of the researcher, must not attempt to profess "objectivity," but rather acknowledge the subjectivity of the theory's author. Methodologically, critical theory reflects the movement's values by questioning power structures as manifested by language, texts or other discourses, in particular, the relationships between culture, economics and "psychic life" (Buchanan, 2010, pp. 100-101).

Critical theory, writ small, includes methodological attempts to hear the voices and individuality of oppressed or marginalized groups and to question why society has not achieved enlightenment and equality. The particular critical theory methodology applied in this project is an adaptation of Foucauldian genealogical discourse analysis, as it provides methods of examining how the concepts underlying classification are formed, which in turn can assist in detecting the underlying epistemological outlook. The results of the discursive analysis are then analyzed to identify the approximate epistemological methodology used to generate the knowledge expressed in the discourse. The methodology section is organized in the following way: First, fundamental terms are defined. Next, Foucault's variety of genealogical discourse analysis is outlined along

with its appropriateness for this research as well as how the methodology used here departs from strict genealogical discourse analysis. Additionally, the selection of the relevant medical, psychological, and legal discursive domains is justified. Next, the criteria for identifying the selected discursive activity are laid out, along with specific questions asked of the discourse in order to glean clues to the epistemology underlying each. The limitations of the study are also included in this section. Finally, the selection of the gender classification system to be analyzed, the *Dewey Decimal Classification*, is justified in its relationship to the selected discursive domains.

Epistemological Assumptions

As noted above, a tenet of critical theory is to acknowledge the subjectivity of the author. I have taken fallibilism as an epistemological approach, as outlined by Hjørland (2013), which states that knowledge is comprised of “inevitable estimates,” and “that it should always be considered provisional” (p. 170). To be sure, just the idea that concepts are fallible indicates a particular epistemic outlook; however, without committing to that perspective, this project would be impossible. Another potential cause for concern is that conventional understandings of postmodernism assume the rejection of classification because they qualify as “grand narratives” of legitimation (Lyotard, 1984, p. 60). However, Lyotard means that legitimation “becomes plural, local, and immanent” and that feminists, trans, and intersex advocates need not reject macrostructures, but rather view them pragmatically and fallibilistically as well (Fraser & Nicholson, 1990, pp. 143-144). In the stance taken here, classifications are teleological and provisional, no matter how much they are professed to “reflect reality.” This enables analysis of the classification as products of discursive activity.

Definition of Terms

A number of terms must be defined in order to provide a consistent understanding and usage throughout. Since this project takes a historical approach, the meanings of specific terms drift, overlap and change in different time periods; in those cases, the meaning appropriate to that time period will be explicated. The first pair of terms that need to be defined are sex and gender, as they are commonly used synonymously but have specific meanings. “Sex,” generally defined by biological evidence, typically comes down to the existence of sex organs, chromosomal patterns, sex hormones, and other bodily markers that signal one sex or the other. Sex is usually presented as binary, fixed, and unquestionable, but the existence of intersex individuals with variant markers as well as medically- and -surgically treated transsexuals demonstrates diversity not captured by the available language. Therefore, West & Zimmerman’s (1987) definition of “sex” as “a determination made through the application of socially agreed upon biological data for classifying personas as female or male” (p. 127) because of the acknowledgement that the criteria for “male” or “female” are indeed socially established and change through time. However, to reflect people with varying biological markers, “or intersex” is added to that definition. Karkazis (2008) writes that the category of “intersex” only exists “because these bodies violate *cultural* rules about gender” (p. 5, emphasis in the original).

“Gender” typically refers to the socially-constructed characteristics, behaviors, and self-markers loosely or strictly associated with the sexes. “Gender identity” generally separates people into man or woman, masculine or feminine, using “gender symbols, such as clothing, body decoration, mannerism, gait, occupational choice, and sexual orientation” (Bullough, 2000, para. 11). The degree of restriction falls on a continuum.

“Loosely” can mean such characteristics as occupational choice (e.g. more women than men are nurses), and “strictly” can mean behaviors that are taboo but not impossible, such as men wearing dresses (it occurs, but is considered rebellious, comedic, or strange). Women reject gendered expectations from occupational choice to lifestyle choice (e.g. to not have children), and appearance. While most people’s gender identities correspond with their sex, trans people can identify with the opposite sex category, a combination, or no specific gender. Trans people can pursue hormone treatments or less commonly, surgical procedures, to achieve the physical markings of the opposite sex, but “live” with the gendered symbols that signal the opposite gender. Often definitions of gender tend to use language indicating coercive measures such as “imposed,” but the increased—but still limited—agency involved in gender identity formation in contemporary western society should still be acknowledged.

Children still are subjected to gendered “boxes” starting from birth, and discrimination and violence still exist based on pervasive stereotypes, and there is no denying these systems of control exist. For example, boys who wish to play with dolls or exhibit stereotypically feminine behavior can be teased, humiliated, actively discouraged, or even hurt. However, greater agency exists now to express gender in a way that diminishes the pervasiveness and rigidity of traditional conceptions of binary gender. As Meadow (2010) puts it, the trans phenomenon invites an opportunity to rethink how sex and gender have been considered in feminist thought (p. 819). For men and women who do identify strictly with their biological sex, gendered expectations can box them into certain behaviors as well as expose them to discrimination, both insidious and violent. While this increased agency exists and is beginning to be reinforced through the media,

academia, law, and popular culture, each person's individual context, including all the broader ingredients, is what influences their decisions of how they express gender.

Though women and transgendered people have suffered greatly from pervasive gender stereotypes, all genders can experience and benefit from liberation. As Talbot (2013) put it, "One can, after all, be a man who doesn't like to work out or play Xbox" (p. 65).

Regardless of gender expression, physical sex should not be ignored. Dreger (1998a) reminds us that knowing one's own sex organs is medically important because of risk of disease. Furthermore, appearing "postfeminist" is also dangerous because, as Bornstein (1994) writes, the danger of a completely humanist philosophy is that it ignores that the "vast majority of the world buys into [the two-gender system]," and the women's movement "must take global priority;" however, whatever work can be done to dismantle the two-gender system should be taken when it can (p. 245). Butler (1999), too, worries that feminist theorists "ought to be careful not to idealize certain expressions of gender that, in turn, produce new forms of hierarchy and exclusion" (p. viii). In other words, feminism needs to continue fighting for equity without marginalizing ambiguous, dynamic or neutral expressions of gender. Meadow (2010) writes that though "individual transgender people... bear the burden of gender's impenetrability, there are central feminist concerns at stake in these determinations" (p. 815), and we must be conscious of the consequences.

Foucauldian Discourse Analysis

"Discourse analysis" can describe any number of analytical strategies, and in Foucault's work alone he describes archaeological, genealogical, self-technology analysis and dispositive analysis. A modified version of Foucault's genealogical discourse

analysis is adopted for this project. Foucauldian discourse analysis differs from critical discourse analysis in that it analyzes larger units of discourse rather than only sentences or words because Foucault believes that discourse encompasses more than just text-based entities. Budd and Raber (1995) agree in that “discourse analysis is not concerned with minute linguistic entities, but with larger units that have meaning, especially in a particular context” (p. 217). They describe discourse analysis more broadly in its application to LIS, but it relates to Foucault’s version. The methodology below has been described in Martinez-Avila & Fox (in press).

Foucault argued that social critique of a subject can be masked by pre-existing, motifs or “themes.” In other words, a subject is considered an external, transcendent “thing” that “evolves” through time. However, this structure obscures the moment-by-moment treatment of the subject because it instead is constantly being related to the broader notion rather than in its individuality. To Foucault (1972), such grouping into a “subject” eliminates individualism and context of any given entity, object or event, rendering it impossible to analyze, as the individual instances meld into a whole, transforming it and losing its impact. More specifically, discourses transform the “permanence and uniqueness of an object as on the space in which it emerges” (p. 32). Foucault (1972) devised archaeological discourse analysis to counteract the thematic nature of historical research, where subjects are examined specifically in a time period, but not with evolving, transcendent meaning. His concept of “epistemes” or “discursive formations” describes paradigm-like knowledge formations that result in differing conceptualizations between time periods, but discretely, not as part of an overarching historical trend. The meeting of discourses defines the object and the perception of it

based on specific moments in time. This method, which he called “archaeology,” worked on a comparative rather than analytical level. Recognizing this limitation when he wrote *History of Madness*, he developed a more analytical approach that sought to recognize not just differences between discursive formations, but also the underlying epistemic reasoning or why subjects were conceptualized the way they are. To resolve this, he devised “genealogical” discourse analysis to show how and why historical events impact conceptualizations in their moments.

Genealogical Discourse Analysis

This project adopts a modified version of genealogical discourse analysis. In what he calls “genealogy,” instead of following the progress of a transcendent “subject,” Foucault (1977a) analyzes discourse to recognize the forces shaping the concept in its specific historical moment. In other words, no transcendent, constant concept of gender floats outside of the messiness of history, but rather, the concept is formed, pulled and shaped in the mire of history, affected by individual events and actions occurring within the immediate moments. Genealogy is not “fabricating a subject that evolves through the course of history,” but rather an examination of the discourse that “account[s] for the constitution of the subject...without having to make reference to a subject which is either transcendental in relation to the field of events or runs in its empty sameness throughout the course of history” (p. 117). Foucault (1981) describes how “the genealogical portion...applies to the series where discourse is effectively formed; it tries to grasp it in its power of affirmation, by which I mean not so much a power which would be opposed to that of denying, but rather the power to constitute domains of objects” (p. 73). He examines how discourses construct subjects rather than how they suppress them.

Methodologically, archaeological and genealogical discourse analyses are similar, but the

genealogical amendments include a more purposeful investigation of the power that underlies the epistemology, rather than mere description. Budd (2001) warns that with discourse analysis, “there is seldom a neat, clean, straight line” (p. 13), and this is precisely what Foucault intended to reveal.

Accordingly, this project examines how sex and gender classification in the *DDC* and legal and medical meta-narrative definitions of sex and gender were formed and epistemically justified. In other words, the subjects of sex and gender are considered defined by what the legal and medical discourse says they are at specific moments in time, and the following analysis attempts to reveal why these concepts are formed the way they are. The epistemic justification and relationship to power are what distinguish it from archaeological discourse analysis. Foucault (1978) writes that discourse analysis is meant to “discover who does the speaking, the positions and viewpoints from which they speak, the institutions which prompt people to speak about it and which store and distribute the things that are said” (p. 11). Power “doesn’t only weigh on us as a force that says no, but that it traverses and produces things” such as concept definitions and even pleasure (Foucault, 1977a, p. 119). In terms of classifications, Martinez-Avila (2012) writes that Foucauldian genealogical discourse analysis can “reveal the perspective, assumptions and goals that drive the organization of concepts and the development of knowledge organization systems through the analysis of the continuities/discontinuities in the relations of concepts and practices” (p. 108). The project examines how these discourses create concepts and how they do or do not support the existing hegemony through classification practices.

Foucault (1977b) describes discursive practices as those “embodied in technical processes, in institutions, in patterns for general behavior, in forms for transmission and diffusion, and in pedagogical forms which, at once, impose and maintain them” (p. 200). The power reveals itself in immediate, local microstructures, in the “daily struggles at the grass roots level...where the concrete nature of power became visible.” Though these individual, microlocations have “fairly limited importance” they “are undoubtedly essential to the general functioning of the wheels of power” (p. 116). In other words, no puppetmaster pulls the strings of power; instead, power “is rooted in a whole series of multiple and indefinite power relations that supply the necessary basis for the great negative forms of power” (p. 122). Thus, the concepts of a domain are comprised by this interplay of discursive activity.

Sex and gender classification fits well with genealogical discourse analysis because the “subjects” of sex and gender are constituted by the classifications and the associated discourse, and also eschew clean, straight lines. Scott (1988) and Barker (1997) ask that gender be defined discursively so that it can reflect the historical moment and not be burdened by history or constructions of biology. The concepts of sex and gender, and ultimately those who are assigned a gender, are subject to the interplay of discourses and rules surrounding that object. The library catalog constitutes one of the microlocations that weave with other institutions’ discursive activities, and thus must be examined for assumptions embedded in classificatory procedures that intentionally or unintentionally or accidentally marginalize specific human groups or discourses. If systems intentionally or unintentionally favor the language or interests of the omnipotent ruling class, “hide” or make judgments about material that potentially threatens the status

quo, the system is not fulfilling its objective. Foucault (1981) writes that one of the systems of power attempts to “assimilate the others both in order to modify them and to provide them with a foundation” (p. 56). The two-gender system disciplines people to tailor behavior, suitable or not, to fit the pigeonholes of masculine and feminine.

LIS researchers that have recommended discourse analysis include Frohmann (1992; 1994a) Budd & Raber (1995), Budd (2001, 2006), and Martinez-Avila (2012). Frohmann (1994c) uses discourse analysis to analyze how marketing tools can create consumer profiles, well before the “big data” trend, describing how these profiles “do not derive from self-reflexive acts of individual egos, but from traces of behaviour pertinent to the apparatuses of consumer and state surveillances” (p. 9). Frohmann (1994b; 1997) also conducts a discourse analysis on the writings of Melvil Dewey that reveal inconsistencies between his technocratic impulses and his inclination toward high culture. Additionally, Olson (1999b) employs it to “identifying and questioning underlying presumptions that operate to construct our realities.” These assumptions are “taken for granted as acceptable” (p. 66). She believes that classifications are also a product of discourse.

Discourse

Though discourse typically is thought of as communication, both through text or utterances, it can also include images and the thematic subtexts or “rules” issued through institutions, formally or informally. Foucault (1972) calls those who are entitled to speak “enunciative modalities,” which can include not only individuals, but also institutions or texts. Foucault (1981) believes these modalities control and reinforce how discourse is produced, “to gain mastery over its chance events, to evade its ponderous, formidable materiality” (Foucault, 1981, p. 52). The purpose is to limit the threat of “others” who

may potentially reduce the power of those in charge. Budd & Raber (1995) call the implied subtext or “rules” the “implicature,” which may not be expressed directly, but which can indicate ideology or worldview (p. 219). Along with directly stated and indirectly stated discourse, silence also holds meaning. Foucault (1978) writes, “Silence itself—the things one declines to say, or is forbidden to name the discretion that is required between different speakers—is less the absolute limit of discourse... than an element that functions alongside the things said,” and the purpose is to “determine the different ways of not saying such things, how those who can and those who cannot speak of them are distributed, which type of discourse is authorized, or which form of discretion is required in either case” (p. 27). Martinez-Avila (2012) also recommends examining the silences: “Exclusions of any type—concepts, users, cultures and more—that are created with the choice of order and control strategies are all subject to the same critical process” (p. 108). Adler & Tennis (2013) describe “erasure” as omission, but “with greater purposiveness” that “requires a restoring or recovering” (p. 269). Nye (1998) describes the forces that influence transgender identity as dimorphically-rigid language, the medical establishment, the legal system, and the popular media. Of those discursive realms, medical and legal discourses are systematically analyzed, as described below.

Classification and Discourse Analysis.

To avoid discourse analysis being misused by positivists, Foucault never precisely prescribed it. This provides some methodological freedom. Hjørland (2013) writes that “ontological theory commits us to identifying and classifying a number of phenomena in a specific way—and vice versa; a listing and classification of a number of phenomena may reveal the theoretical outlook of its creator (‘show me your classification and I’ll tell you what theory you subscribe to’)” (p. 171). With gender, however, despite the

ontological evidence, it is likely that any given selection of classifications may have two options: “men” and “women,” and possibly, “transgender” or “other.” Consequently, the discourse itself will have to be interrogated in order to detect that particular theoretical outlook.

The methodology here follows the notion of the discursive construction of concepts or subjects at specific moments in time; however, it departs from strict genealogical discourse analysis by providing historical connections relating to the development of the concepts of sex and gender that occurred between each timeframe. This is presented as the “social context” for each timeframe and provides historical events in gender and sex research or social or political events outside of the specific medical, legal and bibliographic discourses and leading up to the timeframe. Though the timeframes should be presented discretely if adhering strictly to genealogical discourse analysis, I felt that the landscape of other discourses were also helpful for seeing a wider view beyond the medical and legal discourse. Additionally, the standard practices or notions of sex and gender resulted from breakthroughs or events that occurred outside the particular timeframes here, and without an explanation would be confusing.

This project only examines formal classifications, not cognitive perceptions of gender. Formal classification affords or denies people legal rights, which ideally lead to legitimation and ultimately wider social acceptance. The classifications themselves will be a type of text for examination, as will be the associated documentation that includes justification of decisions within that particular classification. For each edition of the *DDC* examined, the epistemic values are sought for the classificationist body, as the

epistemology is projected by the classificationist, not the classifier or cataloger (although they can be complicit), user group of the classification, or the group being classified.

Epistemology in classification can be detected in a few ways. Classifications are comprised of concepts and the relationships between them, and the way concepts are defined can reveal an epistemic stance (Hjørland, 2009). Lakoff (1983) says, “To change the concept of a *category* itself is to change our understanding of the world” (p. 9, emphasis in original). In linguistics, a similar structural relationship exists between *langue* (vocabulary) and *parole* (rules of grammar), which Budd & Raber (1995) see as discursive indicators of meaning in a text. Both aspects will be considered, using Code’s (1995) concept of rhetorical space (explained in more detail below), in determining the epistemic treatment of sex and gender as objects.

As a tool for maintaining power, classifications are products of a wider cross-section of discourses that dictate ideas of truth (Foucault, 1981). Therefore, the available discourse will be considered with two sets of questions, one set concerning internal procedures and the other on the external discourses. The “internal” discourse includes the *DDC* and its associated discourse: the text of the classification as well as scope note, introductory material, or any other *textus* found in the pages. A limited amount of related discourse is discussed, such as reviews of the system and Dewey’s other writing but the focus remains most intent on the *DDC* itself. The external discourse, which is described in more detail below, includes primary and secondary legal and medical texts. The answers to questions posed are documented and mapped to the epistemic stances listed above or that have been identified elsewhere in academic literature. However, I acknowledge that epistemic stances, too, are a classified human invention, and thus a

pure and exact match to a particular articulated stance is unlikely. Rather, the professed and enacted epistemologies may share characteristics with several articulated stances.

Classification for Analysis

Dewey Decimal Classification

As the story famously goes, during a “long sermon” one Sunday in 1873, twenty-one year old college student and library assistant Melvil Dewey puzzled over some problems with his nascent library classification scheme. He recalled, “the solution flasht over me so that I jumpt in my seat and came very near shouting ‘Eureka!’” (cited in Wiegand, 1996, p. 21). The scheme dreamt up during that sermon appeared in 1876 and went on to become “the world’s most widely used classification scheme,” the *Dewey Decimal Classification (DDC)*. Over the years, the *DDC* has offered abridged versions, summaries, and expanded packages and a constantly-updated electronic version, WebDewey. *DDC* was overseen by Dewey until he died in 1931, but had other editors starting with the fourth edition in 1891. It has been published by The Library Bureau, the non-profit Lake Placid Club Educational Foundation and eventually Forest Press, which was bought by OCLC, the library services vendor, in 1988. With it came an association with WorldCat, the union catalog, as well as Connexion, a package of cataloging tools. All publishers have maintained the tradition of Melvil Dewey’s fierce protectionism of the system.

The *DDC* was chosen for several reasons. As the most widely-used bibliographic classification scheme in the world, the *DDC* has had an oversized influence in library classification. According to recent promotional materials, the *DDC* “has been translated into 30+ languages and is currently used by libraries in 138 countries” (OCLC, n.d., p. 2). It also formed the basis of the Universal Decimal Classification (UDC) shortly after the

turn of the century; though their paths have diverged since. Additionally, a great deal of internal discourse surrounds the *DDC*, whether historically through the comments of Melvil Dewey himself or the editors or more recently through the *Dewey Blog*, as well as prodigious external commentary and critique by scholars and practitioners, including Frohmann's (1994b, 1997) discursive analyses of Dewey's writings. This facilitates analysis of decision-making by the editorial team. Finally, like most institutions, it has an uneven history with the concept of "woman," which will be explicated in the following chapter.

The editions examined were selected because in each a major change occurred in the way the concepts of sex and gender were classified. It is important to note that throughout the *DDC* sex and gender are treated synonymously and use the word "women" (which indicates gender), but under the class of "the sexes." As part of genealogy, Foucault is interested in moments of transition, and each edition represents a shift in the classification of women. As discourse changes externally, as does the classification, which enables analysis of the "ontogeny" of the subject, or what Tennis (2007, 2012b) calls, "the life of the subject over time." This research asks whether the classification changes align with the external discursive changes. The chosen editions are the 1876 first edition, which was the brainchild of Dewey himself; the 1885 second edition, where the category "women" first appeared; the 1965 seventeenth edition, when men gained a category and sex became a social grouping; and the nineteenth edition of 1979 when moved again within social groups. The current edition, the twenty-third from 2011, is briefly mentioned to provide a contrast to how sex and gender are categorized today; however, it will not be fully analyzed. Though the concepts of intersex and transgender

are also analyzed, the editions were selected based on the ontogeny of the concept of woman.

Internal Procedures. The following areas are used as guidelines to scrutinize the “internal procedures” found in the *DDC* and associated discourse:

Establishment of authority/subjectivity. How does the discourse implicitly or explicitly establish the authority—the “enunciative modalities”—on the concepts of sex and gender? Is it “transcendental criteriology” or that which is established exteriorly (Kearney, 2004, p. 169), or does the subject have some authority in the definition or creation of the classification? Who are the experts, and how do they “know?” Foucault (1972) asks, “who is speaking?...Who derives from it his own special quality, his prestige, and from whom, in return, does he receive if not the assurance, at least the presumption that what he says is true?” (p. 50). If the classification is meant for a wider audience rather than a specific domain, Hjørland (2013) asks, “why should one particular authority be chosen without argument?...When an authority is chosen, the classifier has made an important choice among the different competing views in the field. Therefore a classification cannot be neutral” (p. 170). This is preceded by the classificationist, also choosing an authority from which to make ontological decisions in the classification structure.

Any statement of neutrality would also be an indicator of epistemic stance. As Code (1991) explains, epistemology is usually thought of in terms of “S knows that p,” yet “The questions ‘Who is S?’ is regarded neither as legitimate nor as relevant in these endeavors” and that it is commonly assumed that legitimacy comes with “certain standards of *purity*” (p. 2, emphasis Code’s). By “purity” Code means that the knowledge

is unsullied by individual experience or politics. Experience or politics can also be domain or group-specific.

“Necessary and sufficient conditions” for concepts. Concepts are typically thought of in terms of set theory, with a combination of “necessary and sufficient” conditions that serve as minimum qualifications for inclusion in the set. Are the necessary and sufficient conditions metaphysically rigid or graded? Are social or contextual details included or is the definition epistemically “pure?” Are definitions based on Wittgensteinian “family resemblance,” or Platonic universal forms? Are objects considered real “things” or linguistic entities? Hierarchical force in a classification typically indicates these conditions.

Rhetorical space. As mentioned above, Budd and Raber (1995) recommend examining both *langue* and *parole* in analyzing discourse. Code’s (1995) concept of “rhetorical space” accomplishes this task. Fox (2012c) writes that classifying “constitutes a rhetorical act that explicates an intentional or unintentional power strategy of the classification scheme’s editors as perpetrators of the dominant culture” (p. 59). The topics surrounding each subject within a larger class create a space that can dictate perceptions of that topic. To Code (1995), a rhetorical space is “locations whose (tacit, rarely spoken) territorial imperatives structure and limit the kinds of utterances that can be voiced within them...with an expectation of being heard, understood, taken seriously (p. ix). In these spaces, “it matters who is speaking and where and why, and where such mattering bears directly upon the possibility of knowledge claims, moral pronouncements, descriptions of “reality” achieving acknowledgement (p. x). The names and definitions of concepts and how they relate to each other can indicate power relationships. Olson (2007)

operationalizes the idea of rhetorical space by setting the following questions to help determine how the topic is being treated within the structure of the classification:

- What other topics share the class number? Do the allied or related topics devalue others in the same category?
- How is the class described in the scope notes?
- What is the hierarchical context? Is it higher or lower in a hierarchy?
- What other topics are adjacent to the topic? (p. 246).

Olson's use addresses the *parole* of classification; however, rhetorical space can also be applied to *langue*. For example, how is the gender category "other" considered when referring to trans people? The categories of oppression discussed in Chapter 1, including those of Frye (1983), Young (1990), Olson & Schlegl (2001), and Adler & Tennis (2013) are included here.

Code asks how knowledge is created and by what authority, and how that authority allows or silences others. Code refers generally to classification as a method of naming knowledge, but the issues she identifies are relevant to library classification. By attempting to represent knowledge, name new knowledge or rename or reposition existing knowledge, a classification system appropriates the voice of the authority. A classification, by definition, categorizes by objectification, but where a concept is placed, the relationships with neighboring concepts and the name it is given allow respect to be shown or denied. Whose knowledge is it? In Code's view, editors and editorial boards of classification schemes are moral actors who have a responsibility to have empathy for the people and concepts they name (Fox, 2012c). Users of the library who do not share the vocabulary or conceptualization of themselves, or topics for which they are searching,

will adopt the language and rhetoric of the system. Olson (1996) considers classification to be a “mapping of recorded knowledge” that “determines positionality,” a concern of feminist scholars (pp. 303-304). The rhetorical space gains importance in a classificatory text because of its influence on how users create their own knowledge structures.

Classification systems dictate how concepts are represented, and users of the library who do not share the vocabulary or conceptualization of themselves or topics for which they are searching will adopt the language and rhetoric of the system.

Fallibilism and universality. As mentioned above, Hjørland (2013) endorses the doctrine of fallibilism, which considers scientific knowledge “inevitable estimates,” and “that it should always be considered provisional” (p. 170). Furthermore, Hjørland (2009) concludes that knowledge organization systems should not attempt universality, but rather be “linked to different discourses and interests” (p. 1529). He sees concepts as placeholders that help stabilize meaning, so that there is common ground on which to act and communicate, even though concepts may have differing meanings within different domains. Does the discourse show that the classification is rigid or meant to be applied across all domains regardless of context? Does a feedback method exist to imply fallibility? Do the classification’s constructions of gender suggest determinism for the members of the category or allow individualism?

Ontological considerations. Philosophically, ontology is the study of what “is” or what “exists.” Ontology manifests itself in classification by how it is linked to what it is classifying. Does it deviate from what “is” in the “collection” (such as by ignoring literary warrant), or does it define concepts in a particular way that reveals a bias toward or against that concept? As an example, in response to A.C. Foskett’s claim that

classifications reflect the biases of the time, a representative of the Library of Congress insisted in 1972 that classificationists “did not establish usage” but rather, classifications merely reflect knowledge as society defines it (Wolf, 1972, p. 41). In this statement, the Library of Congress takes a Foucauldian view of how concepts are formed, but then relinquishes its own responsibility in shaping ontology, effectively blaming society. Classifications are created for specific domains, and Smiraglia (2012b), writes that a domain is “a group with a coherent ontology, which implies also a shared epistemology” (p. 111). Is the classification based on literary or some other warrant of a specific domain, or is meant to be general and thus applied universally? Does the classification establish the vocabulary externally or take it from the language of those being classified? Beghtol’s (1986b) classic definition establishes bibliographic warrant as the “authority a classification invokes first to justify and subsequently to verify decisions about what classes/concepts to include in the system, in what order classes/concepts should appear in the schedules, what units classes/concepts are divided into, how far subdivision should proceed, how much and where synthesis is available, whether citation order are static or variable and similar questions” (p. 110). All of these considerations are ontological in nature and in application.

Literary warrant is determined through searches in WorldCat for the relevant topics in English, limited to English as the language of the cataloger, during the specified timeframes, as well as through the use of Google Books’ Ngram Viewer, which traces the appearance of particular terms or phrases in its corpus (<https://books.google.com/ngrams>). These are used to establish trends and estimates in warrant rather than exact numbers of items. A precise total would be difficult and likely inaccurate because of repetition of

records in WorldCat, multiple meanings of search terms (for example, literature on “hermaphrodites” can refer to humans or animals), and that Ngram only refers to textual literature that has been scanned and appear in Google Books.

Ultimately, these criteria were chosen to help determine who has the power to speak, what they are saying, in what way they are saying it, on what basis they are saying it, and whether they believe it to be true or provisional. These five criteria seem to most efficiently encompass the basic concerns of an epistemic outlook. To further match the findings of the criteria above to specific, named epistemic stances, Hjørland’s (2002) and Hjørland & Hartel’s (2003) summaries of the values of schools of epistemic thought are used as a starting point.

External Discourse. Following Foucault, the external discourse occurring at the point in time where the classification exists is examined for prevailing metanarrative.

Prevailing metanarrative. Frohmann (1992) rightly points out that discourse analysis is not a search for “truth,” but rather a search for the existence of discourses that shape the way ideas are discussed, or what Foucault (1972) calls the “major narratives” (p. 267). Since the turn toward “truth” that occurred as Plato and Aristotle dismissed the sophistic notion of multiple truths, society tended toward “major narratives, which are recounted, repeated, and varied; formulae, texts, and ritualized sets of discourses” (Foucault, 1981, p. 56). What overarching metanarrative exists regarding sex and gender at the point in time of the classification’s existence, and does it align with the classification? This “will to truth” is supported by institutions, including pedagogy, “the system of books, publishing, libraries; learned societies in the past and laboratories now. But it is also renewed, no doubt more profoundly, by the way in which knowledge is put

to work, valorized, distributed, and in a sense attributed, in a society” (Foucault, 1981, p. 55). The commentary and major narratives make up “the whole framework of knowledge through which we decipher” speech (p. 54). It can include individual apparatus as “speech-acts...religious or juridical texts...literary...and scientific texts” (p. 56). Lyotard (1984) was skeptical of Foucault’s notion of meta-narrative, defining “*postmodern* as incredulity toward meta-narratives” (p. xxiv, emphasis in the original). But Foucault sought to determine what episteme was at play in any particular time to show how it impacted conceptualizations. This can be additionally construed through relevant mass media, commercial depictions, and popular culture signals. Though such institutions as media and religion certainly influence societal attitudes as part of the “interplay of rules,” relevant discourse from those areas is only included to provide context or when it directly relates to a medical or legal decision.

Additionally, it is important to acknowledge the connection between methodology and epistemology. The methodological approach to ontologically defining sex and gender holds clues to epistemology in that it shows the legitimacy in “how” knowledge is determined before evaluating the actual products of its definition. As Kleineberg (2013) argues, the “ontological dimension should be seen as inextricably interwoven with the epistemological (including methodological) dimension” (p. 341). The methodology is related to the process of knowing and is revealed by what type of ontological evidence is deemed credible or valuable (e.g. logic, induction, observation, etc.), who is the authority (e.g. researcher, subject, outside authority, etc.), the fallibility of the authority, and for humans, the degree of subjectivity granted the object. The methodology identifies how that classificationist, physician or judge came to decide what criteria were used to define

sex and gender and any other concept. A related concern to address is that of professed and enacted epistemic beliefs. Professed epistemology is compared to actual epistemology, as the values of the domain in theory can differ in practice, particularly with the lens of history to make that more clear. In other words, particular disciplines may hold an epistemic ideal, but what is actually espoused in observed practice may differ greatly (Louca, et al., 2004, p. 59). Here, that observed practice is the discursive analysis.

Medical metanarrative. Medical knowledge encompasses classification, causal, experimental, theoretical, practical, and clinical, with a general definition of knowledge as “justified true beliefs.” Here the focus will be on classificatory knowledge and its relationship to clinical knowledge. Unlike the physical sciences, which seek to create generalized laws, medicine focuses on deviations such as disease and abnormality (Kimsma, 1990, p. 45). Medicine, however, focused mostly on physical traits, and thus avoided “defining” women’s gender characteristics except in cases of intersexuality or as non-clinical discourse, discussing why women are not suited to be physicians. Though within the field, medical epistemology is a necessary but unexamined concept, scientific knowledge has been evaluated by philosophers (e.g. Kuhn, Popper, Kant, Foucault, etc.) more than medical professionals (Roex & Degryse, 2007).

Because of significant influence and overlap with psychology and sexology, the term “medical” here is expanded to encompass discourse in those disciplines insofar as they contribute to clinical definitions and decisions. Psychology generally began to be taken seriously as a science in the mid-century and became a crucial element of sex determination (Reis, 2009, p. xiii). Ashcroft (2004) argues that a major problem for

clinical knowledge is the positioning of medicine “as an autonomous science, (as opposed to a collection of knowledge drawn from diverse more basic sciences)” and that medicine’s knowledge claims occur within “a web of theoretical and empirical commitments” (p. 133). Meadow (2010) notes that medical categorizations of sex are just as contested as legal configurations and are consequently historically dynamic (p. 816). What does the medical establishment consider the biological psychological underpinning of gender and sex roles? Though mostly descriptive, Gray’s *Anatomy* represents a current level of understanding of anatomy and occasionally betrays a hint at social influences. What physical or psychological characteristics are associated with the sexes, and in particular, when gender or sex is contested?

Gray’s, as a textbook, presents normative representations of sex. However, when sex is unclear or conflated with gender, the medical establishment is forced to “define” the characteristics of each sex. In terms of treating intersex newborns, Fausto-Sterling (2000) describes how medical practice varies widely, depending on the training of the physician and the beliefs held, as “No national or international standards govern the types of intervention that may be used” (p. 48). Thus, the most useful discourse in this regard are those that discuss cases of intersexuality or transsexuality. Meta-analyses of intersex, transsexual, and transgender history were found in Dreger (1998a), Fausto-Sterling (2000), Meyerowitz (2002), Hester (2004), Karkazis (2008), Greenberg (2012), and others that provided historical perspective for Western medical conceptions of sex in contested bodies. These sources were used to identify the medical metanarrative as well as to direct to primary sources for closer examination. Finally, it is important to note that the discourse describing sex and gender tended to be on the edge of a research front.

Legal metanarrative. What is the legal status of sexes, and variant and non-conforming people in the United States? Legal status only partially means the rights and recognition that are afforded women, men, trans or intersex at the time of the classification's creation or revision through statutory law or through the courts. Rights that are recognized based on sex require that the courts in cases of dispute define sex, such as with trans or intersex people. More importantly, gendered justification for the rights or lack of rights that reveal the reasoning behind the decisions provides clues to epistemic stance. For example, "natural" characteristics of women were used to justify exclusion from contracts and consequently property-owning, which funnels down to voting rights.

The major legal sources used include a variety of law dictionaries and medical jurisprudence texts created and revised during the selected timeframes, as well as case law and legal codes relating to sex and gender. Each dictionary definition contains references to the case law or statutory law the definition is derived from, along with telltale editorializing. *Black's Law Dictionary*, now in its ninth edition, is the definitive dictionary of American law, but the first edition was published in 1891, after the timeframe had passed. Consequently, *Bouvier's Law Dictionary's* fourteenth edition (1870-1871) was used for the first timeframe, and other editions were used as a comparison for the other timeframes, although *Black's* from mid-century is the most commonly used dictionary in the field, cited by the attorneys, legislators, and the judicial, including the United States Supreme Court.

Though the medical metanarrative can be separated from the legal narrative, extricating the medical from the legal proves more difficult in gender-related cases. In

litigation involving women identifying as women, medical input usually is downplayed in favor of what is perceived to be “natural” and within the experience of those making the decisions. For those definitions, legal dictionaries help summarize the current legal thinking on those topics. However, in cases of gender variance or non-conforming gender, the medical input becomes central. Thus, the following chapter combines the two, using medical jurisprudence texts, which offer guidance to attorneys in the medical aspects of their cases and relate somewhat to what we would call forensic investigation now. Dean (1866) defines “medical jurisprudence” as “that science which teaches the application of practices and principles of Medicine to the elucidation and settlement of doubtful questions arising for investigations in courts of law” and relies heavily on earlier medical jurisprudence texts for descriptions of different cases (p. 1). Typically these texts include chapters on toxicology, wounds, rape (usually regarding conception disputes), impotence and sterility (for divorce cases) and other medical issues that wind up in the center of litigation. Medical jurisprudence texts and legal dictionaries are considered secondary sources, as they do not serve as precedents; they are only persuasive and not definitive. However, their purpose is to provide an overarching sense of a law, which corresponds with the purpose here of seeking a metanarrative.

Limitations

The limitations of this methodology relate to the limits of discursive analysis and the epistemic evaluation. The looseness of discourse analysis constitutes both its strengths and limits as a methodology. However, Foucault’s views change throughout his work and he makes a point in particular not to be prescriptive. Thus a certain license is taken with discourse analysis that serves the purposes of the project. Moreover, discourse,

by nature, is messy and presents in many forms. Consequently, any attempt to quantify or limit it fundamentally violates the notion of discursive analysis. Additionally, drawing conclusions for the discourse results in codification of it, which then, despite best intentions, results in a “grand narrative” of which Lyotard and others criticize.

As for the epistemic evaluation, another limitation is that epistemology usually is discussed or recommended in an ideal form. Interpreting its operationalized form is difficult because people sometimes, but not always are thinking of preserving the purity of their knowledge creation. Philosophers who have defined various epistemic stances define them in terms of ideals: in other words, they describe stances as they believe they ought to be or how humans should strive to them; however, in reality, enacted epistemologies do not follow these idealized version, or do so for perverse motives, as people acting in their own self-interests and adjust their epistemology to support them. This leads down the philosophical rabbit hole of ethics and explanations for moral (human-inflicted) evils in the world. It is of course acknowledged that epistemic stance is not uniform across every member of a discipline; the intention is to attempt to recognize dominant approaches to knowledge creation about gender. Epistemic stances are nuanced, conflicted, and thus necessarily reductive main principles will be presented, as a detailed history of the origins of any given stance is beyond the scope of the project.

Conclusion

For Foucault, the concept of “resistance” is crucial to the understanding of power. In order for power to be evident, resistance must occur. The vast amount of academic and popular discourse on gender demonstrates that some sort of power is being resisted. However, in Foucault’s (1977) view, no overarching, monolithic “power” exists pulling

the puppet strings, but rather a multitude of discursive apparatuses interacting to limit by defining. This project is needed in order to single out small apparatuses of power for analysis. In my specific context, classifications are the apparatuses of power, “linked in a circular relation with systems of power which produce and sustain” them” (p. 133), or the *DDC* serves as an apparatus, with the legal and medical discourse partially sustaining it. Foucauldian discourse analysis is an appropriate research methodology for investigating both gender and classification. The elimination of standing assumptions about women, men, binary or even multiple gender or sex, will allow individual analysis of particular classification schemes in their cultural context and discursive activities. The changes that occur over time can be revealed genealogically, but as Budd (2001) warns, “The process of interpretation may be selective, or reactionary, or it may be obstructed by some other force. The outcome may be a lineage with a number of bends and breaks in it, but one that illustrates precursors, whether they be abstracted either purposely or accidentally” (p. 13).

The neatness required for classification conflicts with the messiness of reality, and therefore, compromise between accuracy and effectiveness is required in any classification system. The sticking point is what that compromise means to the user groups or social groups represented in the classification scheme. Regarding gender, it is important to stress that, say, acting feminine as socially prescribed, such as wearing a dress, is not a bad thing. To be sure, even if gender disappears tomorrow, people will continue to paint their toenails and wear pink. However, these gendered traits should not be considered compulsory and should be extended more widely to those who wish to do so regardless of the gender assignment. In particular, those who reject gendered

expectations for appearance, occupation or behavior, or those who physically are intersex, transgender or asexual should have formal and informal classificatory spaces because classification provides legitimacy. With legitimacy comes (we would hope) a reduction of the more frightening aspects of the violations of compulsory gender roles: hate crimes, harassment, and violence as well as more subtle forms of oppression. A classificatory structure that enables flexibility can allow for the construction of the self, by the self. Alcoff (1988) writes “women who have been eternally construed must seek a means of articulating a feminism that does not continue construing us in any set way” (p. 410), and this should be true of anyone. Although the two-gender system currently dominates, Alcoff advises that it is not static: “Can we conceive of a future in which oppositional gender categories are not fundamental to one’s self-concept? Even if we cannot, our theory of subjectivity should not preclude, and moreover, *prevent*, that eventual possibility” (p. 452, emphasis mine). Subjectivity must not fall victim to failure of imagination.

Chapter 4: Findings, External Procedures

“There is no legal or medical definition of sex”

C.N. Armstrong, from *Intersexuality in vertebrates including man*, 1964

Although medical-scientific research possesses an air of objectivity and authority, it still represents the current state of human understanding of whatever phenomena are being studied, as shaped by peer review and current technology. Similarly, legal discourse indicates a provisional status that represents the opinion of a particular court or legislative body. Spade (2011) writes, “We must also be cautious not to believe what the law says about itself since time and again the law has changed, been declared newly neutral or fair or protective, and then once more failed to transform the conditions of disparity and violence that people were resisting” (p. 27). In terms of sex and gender classification, Meadow (2010) argues that formal classification “denigrat[es] the status of individuals while reinforcing the neutrality of the system” and consequently that law “an institutionalized piece of gender accountability” (p. 816, 818). Thus, this chapter identifies the changing views of gender in the medical-scientific (to include psychology) and legal discourses. Substantial discussion of the epistemic impact is reserved for the final chapter.

Legal discourse, particularly capricious, relies alternately or simultaneously on research and the instinct—such as Garfinkel’s rules—of those involved in the decision-making. Supreme Court Justice Oliver Wendell Holmes, Jr.’s (1881) famous introduction to *The Common Law* describes this phenomenon:

The life of the law has not been logic: it has been experience. The felt necessities of the time, the prevalent moral and political theories, intuitions of public policy,

avowed or unconscious, even the prejudices judges share with their fellow-men, have had a good deal more to do than the syllogism in determining the rules by which men should be governed. (p. 1)

The capriciousness, inconsistency and non-linearity of legal rulings and legislation associated with gender perfectly illustrate his words, even to this day. Court cases document one court's interpretation of existing law and different decisions result from similar facts, thus the terms "decision" or "opinion."

Some of the earliest written law cases involving sex and gender asked whether conception could occur when a woman was raped, as for some time people believed that orgasm was required for conception. As an example of how an outdated notion can persist in the face of all evidence, as recently as 2012, Senate candidate Todd Akin remarked that a woman's body cannot get pregnant from "legitimate rape," though the consent-proved-by-pregnancy notion was considered legally "absurd" by 1820 (Laqueur, 1990, p. 162). Legislators hold significant power, despite how inaccurate, outdated, or ideological their beliefs. Not that attorneys are beyond reproach, but legislators can come from any professional ilk, and thus may not have a background knowledgeable of the impact of legal protections. In recognition of this instability, sex and gender have been determined by a changing set of criteria through history and the dynamicity buttresses West and Zimmerman's (1987) definition of sex as "a determination made through the application of socially agreed upon biological criteria for classifying person as females or males" (p. 127).

This chapter addresses what Foucault calls the "external" procedures, which identifies the status of sex and gender classification attitudes expressed in medical and

legal discourse. Assuming that change in the classification is influenced both by literature as well as research and societal attitudes, the timeframe between revisions of the *DDC* is where the external discursive analysis will take place (See Table 1 below).

Edition	Publication date	Period of analysis for external discourse	Editor	DDC gender classes
First	1876	1871-1876	Melvil Dewey	none
Second	1885	1876-1885	Melvil Dewey	396
Seventeenth	1965	1958-1965	Benjamin Custer	301
Nineteenth	1979	1971-1979	Benjamin Custer	305
Twenty-third	2011	2003-2011	Joan Mitchell	305--0

Table 1: *DDC* versions analyzed

As mentioned previously, this chapter identifies “major narratives, which are recounted, repeated, and varied; formulae, texts, and ritualized sets of discourses” (Foucault, 1981, p. 56) that occur in the relevant discourse. Also, to avoid the error, pointed out by Budd, Hill and Shannon (2010) of taking the Humean approach of applying every “individual as fully representing society” (n.p.). I acknowledge that I am identifying emergent themes, not necessarily the opinion of every member of the discursive community and applying them collectively. Thus, the following does not exhaustively identify every obscure mention of sex and gender in the scientific and legal discourse, but rather follows the arc of influence that impacted broad, paradigmatic ways of thinking in each timeframe listed above. Discussion of the *DDC* and its “internal procedures” follows the discussion of external procedures in chapters 5 and 6.

The “definitions” of sex and gender in medical and legal discourse appear most often in two forms. First, defining occurs when a distinction must be made between those men and women who identify with their sex, usually in the context of explaining why women cannot do the things men do, and later explaining the differences between men and women, with women usually coming out unfavorably. This most pointedly occurs with

legal or medical explanations as to why women cannot practice law or medicine. In legal literature, this form is particularly prevalent prior to the Equal Pay Act of 1963 and Civil Rights Act of 1964, which legally ended sex as a differentiator in employment. However, where differentiation cannot be avoided, such as with concerns surrounding pregnancy, the solution has been to place pregnant women in a protected class, which is also not without controversy (Pregnancy Discrimination Act of 1978). Outside of employment, the Equal Protection Clause of the Fourteenth Amendment, which had been designed to protect blacks, was changed to also protect from sex discrimination elsewhere, in the case of *Reed v. Reed*, (1971) where “males must be preferred to females in appointed estate administrators” for divorces.

The second focus of defining occurs when trying to fit transgender practices or intersex bodies into a binary conceptualization of sex. For example, the medical discourse on intersex people provides insight into what criteria are used to classify normatively sexed and gendered people. Because of the implausibility of non-binary sex and gender categories, physicians needed to provide clear definitions of man, women, male, or female. A byproduct of this “defining” in medical literature is that the expectations are also laid bare for those who identify with and perform the gender associated with their physical sex. In their quest to find the “true sex” of individuals, the expectations are set for what constitutes “true sex” including many social markers and sexual practices.

Civil rights for intersex people had long been a discussion in topic both medical and legal discourse. As early as 1741, James Parsons was writing about the legal rights of intersex people, asking, “What, but Ignorance and Superstition could urge Men to make laws for [hermaphrodites’] Destruction or Exclusion from the common Benefits of Life?”

(p. xvii), and goes on to catalog the ways various civilizations had tortured, executed or exacted laws on intersex people, including being “shut up in a chest, and thrown into the Sea” or being prohibited from “unlawful Copulation” or “convers[ing] with Men alone in any private place” (p. xxvi). In his treaty, Parsons brings up questions that are still debated in the public domain over two and a half centuries later, such as whether an intersex individual have a man’s or woman’s name or whom an intersex can marry (pp. xxxiii-xxxvii). Moral concerns crop up regularly, such as the fear of women “abusing” what were perceived to be oversized clitorises (p. 13). To those posing the questions, the answer comes down to whether hermaphrodites are predominantly male or female—their “true sex.” Based on Parsons’s (1741) summary, clearly a robust discourse on intersexuality existed throughout history. Though these questions were formulated over 250 years ago, those same questions are still being asked and form the basis of medical determinations and legal decisions made about gender today.

Sex and gender-related legal and medical concerns of women, trans and intersex people are often lumped together, but they differ. Some issues common to all include discrimination in employment, bullying, and denial of other privileges such as property rights, suffrage or military conscription. However, women struggle for rights and non-discrimination, but have difficulty with the essentialist aspects of being a protected class as well as the reality that legal protection does not offer blanket equality (Kirkland, 2003, p. 4). For intersex people, the concerns largely involve the legal requirement for surgical alteration of genitals, in order to “normalize” them or place them unquestionably in one of two categories. Intersex people find themselves in the same legal predicaments as trans people if, at a certain age, they feel their parents reared them in the wrong gender and

want to change. Is surgery considered “cosmetic” or “corrective?” Since intersexuality is now most often detected at birth, legal consent can be disputed, as parents may or may not have the child’s best interests in mind or even know what the child’s best interests are. Who decides which sex to choose, parents, the child, the endocrinologist, or a surgeon? Conversely, transsexuals, throughout history, have fought for the right to have surgery or other non-surgical medical treatment, which proved difficult at times when the medical establishment was doubtful or under pressure not to allow it whether legally, ethically or socially. Insurance coverage of these procedures also can be inconsistent, which leads back to economic concerns and privilege. Additionally, medical education around trans health has been notoriously lacking.

Because of the wide array of methods in which laws are passed and interpreted, as well as the influence of personal opinion and ideology, it is difficult to provide a linear trajectory for legal reasoning. Legislation serves as a starting point for issues that eventually are interpreted by the courts, which can be appealed and overturned. Governmental laws and regulations may differ between states and between the state and federal governments and agencies. For example, the Social Security Administration (federal agency) may have different legal requirements for proof of gender than the individual state Departments of Motor Vehicles (state agency) (Spade, 2011, p. 145). Adding to the jumble is that conflicting rulings in case law may be made simultaneously in different states on the same issue. Medical discourse seems to experience paradigmatic change with emphasis on different groups, depending on the era. A brief description of the social context will introduce each timeframe below, followed by the identification of the medical and legal narratives, and finally the discursive analysis of the *DDC* editions.

Analysis of the Discourse

Social Context 1871-1885

As Dewey was devising his first edition of the *DDC*, the U.S. was at the tail end of reconstruction after the civil war, though the discrimination experienced by black Americans was a long time from legally ending. The first wave of white feminism was cresting, mainly focused on legal rights, specifically suffrage, education, and property rights. The first women's rights convention at Seneca Falls occurred in 1848, and only Wyoming, in the hopes of attracting women to the state, had passed women's suffrage in 1869. Both Democratic and Republican party platforms in the 1868 elections vowed to keep suffrage to men (Republicans) or to the decision of the individual states, which meant men (Democrats). Susan B. Anthony (illegally) cast her vote in Rochester in 1872, but the Nineteenth Amendment of Constitution allowing women to vote would not be passed for nearly 50 years. During this time, the medical field began to professionalize in the United States. The discourse included English medical journals. The first American edition of Gray's *Anatomy* had been published in 1858. The first woman doctor, Elizabeth Blackwell, graduated from medical school in 1849, Sarah Hackett Stevenson became the first woman member of American Medical Association. The legal profession was well-established as a masculine institution, though Arabella Mansfield was the first woman lawyer admitted to the bar in 1869 (in Iowa). Varying untraditional partnerships, such as where women lived in as husband and wife, with one cross-dressing, arose often as a literary trope in the eighteenth and nineteenth centuries, which were based on occasional news items that critics argue were embellished to titillate (Coontz, 2005). However, these partnerships typically did not appear in legal or medical discourse unless

one partner was intersex or if the partnership was identified as a fraud to commit homosexual acts.

Though conventional wisdom tells us the Victorian Age was buttoned up with sexuality not discussed, Foucault (1978) notes that the “hypothesis of repression” led to assumptions about the erasure of these topics from discourse. Conversely, he found that a “steady proliferation of discourses occurred,” starting in the seventeenth century, and from the institutional level, not just ‘illicit,’ underground sources (p. 18). He found “Rather than a massive censorship..., what was involved was a regulated and polymorphous incitement to discourse (p. 34). The nineteenth century also brought an incessantly-discussed new understanding of the concept of sex (gender was not yet conceptualized in its current usage).

Medico-legal Metanarrative 1871-1885

The following sections will discuss first legal depictions of sex, and then move to intersex, where much of the medical defining occurs, within medical and medical jurisprudence discourse. Not much is written about trans people in either discourse during this timeframe, as it was not considered a medical issue, psychology was not developed enough to pay attention to it, and legally no justification existed to prosecute, unless some sort of criminal fraud was involved.

Men and women. In the 1870 fourteenth edition of *Bouvier’s Law Dictionary*, an authoritative Anglo-American reference still in use, the definition of the term “sex” notes the “physical difference between male and female animals,” without explicating what those physical differences are. However, whatever those differences consist of, they result in legal differences: “In the civil state, sex creates a difference among individuals,” listing the same incapacities in the definition of “woman” and “wife” discussed below.

The omission of the actual differences serves as a telling reminder of the weak justification for these legal differences. Gray's *Anatomy* (1862) provides a detailed and mostly bland description of sex organs, but proclaims in the first sentence, that "the Penis is the organ of copulation" (p. 740). The description of the hymen notes that because of variation, "it cannot, consequently, be considered as a proof of virginity" (p. 751). Gray's falls into the medical discourse as classificatory knowledge, which focuses on norms rather than variation.

In *Bouvier's*, the term "women" is defined as "All the females of the human species; all such females who have arrived at the age of puberty," demonstrating that sex and gender are unsurprisingly interchangeable at that point in time. The term "mankind" is legally termed "Persons of the male sex; the human species," with an afterthought that "females as well as males are included," and also hastily notes that it is a felony "to commit sodomy with mankind or beast" (p. 99), thus reinforcing legal discrimination toward gay men. A wife is obligated to "love, honor and obey her husband, and bound to follow him wherever in the country he may choose to go and establish himself...She is under obligation to be faithful in chastity to her marriage vow" (p. 661). As for "husband," the dictionary implies that men are legally entitled to reject the inevitable henpecking of their wives. It makes clear that he must "love his wife, and to bear with her faults" (no such faults in men are mentioned in the definition for "wife,") "and if possible, by mild means to correct them" (p. 675). Twice in the definition, it is mentioned that he can make decisions without his wife "controlling" him.

The definition for women in *Bouvier's* occupies a full page, mostly referring to the property and contractual capability differences from men. The definition of "wife," on

the other hand, adds an additional two pages of differences by state, mostly referring to what happens to marital property if the wife is abandoned, adulterated against (adultery is criminal at this point, and continues to be in some states) or the husband becomes insane. The sections are prefaced by a note stating “A great change in favor of the wife has been produced by recent statutes in a majority of the United States” (p. 661). The general definition declares, “For her protection, the wife is rendered incapable of binding herself by contract” (p. 661). The key term used is “incapacity,” which is legally defined as “The want of a quality legally to do, give, transmit, or receive something.” What this means is that the person has some deficiency that renders her unable to properly make decisions. “In general, the incapacity ceases with the cause which produces it. If the idiot should obtain his senses, or the married woman's husband die, their incapacity would be at an end” (*Bouvier's*, 1871, p. 695), thus, marriage brings on a state similar to idiocy. In New York, the Married Women's Property Act had been passed in 1848, overturning incapacity, with all states following suit by 1900, but the legal dictionaries maintained married women as an example of incapacity, along with idiots, at least until 1948. No urgency for revision seemed to accompany the changes. Also telling is how legal rights are recognized:

Single or unmarried women have all the civil rights of men; they may therefore enter into contracts or engagements... but they are generally, not possessed of any political power; hence they cannot be elected representatives of the people, nor be appointed to the offices of judge, attorney at law, sheriff, constable, or any other office, unless expressly authorized by law. (p. 679)

If women are prohibited from appointment as a judge or attorney, they by definition are excluded from defining their own legal rights. Additionally, women could not serve on juries by law until the turn of the century, and were not consistently included until well into the 1970s. Here lies a literal embodiment of the metaphor expressed in the seventeenth century by a feminist cited by de Beauvoir (1949) in *The Second Sex*: “All that has been written about women by men should be suspect, for the men are at once judge and party to the lawsuit” (p. xxv). Hence, the dictionary, if not the greater legal environment, becomes an epistemological echo-chamber in which men make laws by and for the interests of men. The reasoning is justified through difference for which she has no recourse to dispute: “The principal reason of this exclusion is to encourage that modesty that is natural to the female sex, and which renders them unqualified to mix and contend with men; the pretended weakness of the sex is not probably the true reason” (*Bouvier’s*, 1871, p. 517).

The legal dictionaries, though sprinkled with editorializing, are less useful than legal opinions, which include often lengthy and editorializing justifications for decisions. In the case of women, that reasoning was often to explain why women could not do things that men could do, usually deferring to the “law of nature.” According to legal theory of the time, the phrase “law of nature” or “natural law” were code for divine law, or the law of God (Austin, 1832, p. 2). As a typical example, in his 1869 refusal of Lavinia Goodell’s first application to the Wisconsin State Bar, Chief Justice Edward Ryan laid out exactly why sex was a barrier for success in the legal profession, repeatedly citing “the law of nature,” and when women are interrupted from their destinies, “the bearing and nurture of the children of our race and for the custody of the homes of the

world and their maintenance in love and honor” disrupt this order, “and when voluntary, treason against it.” The characteristics he assigns to the female sex include “its gentle graces, its quick sensibility, its tender susceptibility, its purity, its delicacy, its emotional impulses, its subordination of hard reason to sympathetic feeling.” The legal profession is “selfish and malicious, knavish and criminal, coarse and brutal, repulsive and obscene...It would be revolting to all female sense of innocence and sanctity of their sex, shocking to man's reverence for womanhood and faith in woman, on which hinge all the better affections and humanities of life, that woman should be permitted to mix professionally in all the nastiness of the world which finds its way into courts of justice (*In re Goodell*, 1876); another way of saying “for her protection.” Yet, her second application, in 1880, was accepted by the majority with the dissent only of Ryan, who had issued the original decision.

We are satisfied that the applicant possesses all the requisite qualifications as to learning, ability and moral character to entitle her to admission, no objection existing thereto except that founded upon her sex alone. Under the circumstances, a majority think that the objection must be disregarded. Miss *Goodell* will therefore be admitted to practice in this court upon signing the roll and taking the prescribed oath. *By the Court.-So ordered. (In re Goodell, 1880, emphasis in original)*

The decision’s progressive tone and brevity contrasts Ryan’s lengthy original points. Similarly, in the Supreme Court’s denial of Bradwell’s application to practice law, the court argued that:

the civil law, as well as nature herself, has always recognized a wide difference in the respective spheres and destinies of man and woman. Man is, or should be, woman's protector and defender. The natural and proper timidity and delicacy which belongs to the female sex evidently unfits it for many of the occupations of civil life...The paramount destiny and mission of woman are to fulfill the noble and benign offices of wife and mother. This is the law of the Creator. And the rules of civil society. (*Bradwell v. State of Illinois*, 1873)

Throughout the decision, the phrases such as “the nature of things” and “destiny and mission of women” contribute to the deterministic appeal to the “law of nature.”

The decisions above are typical of one approach to denying rights to women, but the other approach relies on the circular argument that women cannot participate in whatever public realm to which she attempts to gain entry because it is illegal. For example, in the trial of Susan B. Anthony for casting her illegal vote in 1873, the court sidesteps the issue of why a woman should not vote and relies instead on the fact that it is illegal. In the opening argument, the prosecuting attorney says little more than “Conceded, on the 5th day of November, 1872, Miss Susan B. Anthony was a woman” (*United States v. Anthony*, 1872). Similarly, the Supreme Court, in denying Virginia Minor's right to vote, argued, in a tortured manner, that it was possible to be a citizen, but not be allowed to vote because it was illegal in her state (*Minor v. Happersett*, 1874).

Unlike law, which could be self-taught through books, medical education during this time period required resources inaccessible outside of medical colleges. Though a full discussion of women's entry into the medical profession is beyond the scope of the paper, some discussion of the justification for barring women represent the profession's view of

women as a sex. The initial influx into the profession began with the first wave feminist movement, but interestingly was also supported by more conservative movements that advocated for women's gynecologists because the delicacy of women could not tolerate a pelvic exam by a male physician. Yet, it was that same "delicacy" that was used to bar women in medicine, where it was argued that women's constitutions were too fragile to withstand repugnant medical knowledge and that menstruating left them unfit for the responsibility (Justin, 1978, p. 42). *The Boston Medical and Surgical Journal* reports that Elizabeth Blackwell "is a pretty little specimen of the feminine gender" with a "fine phrenology" who maintains an "unchanged countenance," perhaps assuaging notions that women would be disgusted by medical knowledge ("Females attending" 1847, p. 405). However, those types of hypotheses disappear over the course of the nineteenth century with the establishment in 1847 of the AMA, standardizing the profession in an effort to diminish "quackery" and folk remedies.

Delicacy, too, extended to the toll any physical or intellectual exertion would take on a woman's reproductive organs. In a grand statement that cited everyone from Shakespeare to Virgil to the Bible, Dr. Edward H. Clarke, M.D. (1875) threatened that if women continued to educate themselves, their reproductive abilities would become so weak that men would be forced to seek their wives overseas:

It is not asserted here that improper methods of study, and a disregard of the reproductive apparatus and its functions, during the educational life of girls, are the sole causes of female diseases; neither is it asserted that all the female graduates of our schools and colleges are pathological specimens. But it is asserted that the number of these graduates who have been permanently disabled to a greater or less

degree by these causes is so great, as to excite the gravest alarm, and to demand the serious attention of the community. If these causes should continue for the next half-century, and increase in the same ratio as they have for the last fifty years, it requires no prophet to foretell that the wives who are to be mothers in our republic must be drawn from trans-atlantic homes. (p. 63)

Despite the professed protection of women and their reproductive organs, looking closely at the discourse, the actual issues seem to be competition, exploitation, credibility, and even more so, humiliation. The assumptions of medical institutions change depending on need. For example, in the western states, where more physicians were needed, the medical associations were more accepting of women physicians, but in the eastern states, women had difficulty attaining opportunities for internships and procuring licensure. Similarly to law, the circular argument was made that women made poor doctors because they had not trained with the best teachers; yet, they were barred from attending those institutions. Additionally, there seemed a fear that patients would not accept women physicians. For example, Dr. Elizabeth Blackwell was listed as “E. Blackwell” to obscure her sex (“Our Lady Members,” 1959, p. 297).

Most tellingly, in an 1869 joint statement of the professors of the University of Pennsylvania and Jefferson Medical College, along with an assortment of physicians throughout Philadelphia, the male doctors expressed their opposition to women attending mixed-sex medical courses. Their major reasons included that no male patients “should be subject to inspection before a class of females,” that during operations, male patients may be exposed in a way “unfitted for the observation of students of the opposite sex” because they are “shocking to the sense of decency, and entail the risk of unmanning the

surgeon, of distracting his mind, and endangering the life of his patient.” Referring back to the “law of nature” along with a higher morality, they grandly end with “that high estimation of womanly qualities, which should always be sustained and cherished...is lost by an inevitable and positive demoralization of the individuals concerned, thereby entailing most serious detriment to the morals of society” (as cited in Marshall, 1897, pp. 22-23). This resulted in a disdainful response from the dean of the Women’s Medical College of Pennsylvania that “science is impersonal, and that the high aim of relief to suffering humanity sanctifies all duties; and we repel as derogatory to the profession of medicine, the assertion that the physician who has risen to the level of his high calling need be embarrassed, in treating general disease, but the presence of earnest women students” (as cited in Marshall, 1897, p. 26).

Similar to the Philadelphia physicians’ concerns, the issue had little to do with women’s ability to perform, but rather the male physicians’ prudery in their presence, appealing to moral “decency” as justification. A vigorous debate ensued for weeks in the *Times’* letters-to-the-editor column following an article about mistreatment of women medical students mostly by male medical students at Bellevue Hospital, arguing how the law of nature makes women both appropriate and inappropriate for medicine, depending on the perspective. One letter, from an admitted “old school” of thought, responds that “The profession of medicine is too high a one for woman to aspire to; too great in its bearings for her to grasp,” but then gets to the real issue, writing that a male physician, while “lecturing at Bellevue, his cheek has blushed to find women as his auditors, listening to lectures most unfitted for them to hear. With such feelings a lecturer cannot give true scope to his subject, his manliness is insulted, and if he possesses any delicacy

of sentiment, he naturally must be obliged to study his language and clothe his sentences in a way the least offensive to the ear of woman” (“Medical Women,” 1864, n.p.). The cited physician betrays that it is really his embarrassment, not the women’s, that leads to discomfort in his lectures. However, this is secondhand account, and a multitude of letters directly dispute this viewpoint, admitting that women have an appropriate sphere, as set forth by the creator, which is their natural role for caring. Also, the letters mostly appear to be written by women medical students or their supporters. The silence of the male physicians could indicate a lot of things; however, they were at risk if they spoke out. Despite the willingness of the medical schools to admit women, the professional and licensing organizations fought women’s entry into the field. For example, the Philadelphia Medical Society ejected male physicians who taught in women’s medical colleges or even consulted with women doctors (Justin, 1978, p. 42). This exemplifies the “implicature” or non-text rules and subtext that accompanies discourse.

The “law of nature” was also supported by the surge in popularity in the pseudoscience of phrenology in the nineteenth century in the United States. Though now considered quackery, phrenologists believed that the size and shape of the brain indicated the development of particular characteristics, called “faculties” that can be detected by “reading” bumps on the head. They positioned themselves as a sort of moral police, in opposition to doctors. The Fowler brothers popularized phrenology in the United States, particularly in New York around mid-century before emigrating to England in 1860. The Fowlers more or less adapted the theory from Gall, who founded the “science” in England, and they lectured and published extensively on the subject, with religious and

moral overtones: “Who will...stand up for God and humanity in this war with evil *at its roof?* Doctors should, but will not” (Fowler, 1843, p. 31).

Albany, New York, was a hotbed for phrenologists. Coincidentally, the Fowlers attended Amherst College, the same nearby Massachusetts college from which Melvil Dewey graduated in 1874. Wiegand (1996) writes, “nothing Dewey encountered at Amherst induced him to question the dominant culture...his college experience constituted an immersion in Anglo-Saxonism” (p. 24), which based on the literature of the time, apparently included phrenology. Medicine and law had ties to phrenology in Albany. Amos Dean (1834), a prominent medical jurisprudence author who founded Albany Law School and the Albany Medical College and later went on to be the president of the State University of Iowa, delivered lectures on phrenology to the Young Men’s Association for Mutual Improvement of the City of Albany, describes the characteristic of “philoprogenitiveness” or the “instinctive feeling of attachment to children” or of “regret at the death of a friend” to be particularly developed in women, but “Reason is not its parent” (pp. 79, 88, 80). Additionally, children confirm that this is true because “While the boy cracks his whip and rolls his marbles, the girl is displaying her excellent taste in the dress of a doll” (p. 81). On the other hand, men’s brains show more of a propensity “to destroy inanimate objects,” and deliberately “wounding the feelings of others” (p. 94). Men are bestowed with more self-esteem, and to compensate, women have more benevolence and amiability (p. 117). Development of each faculty or activity of faculty depended on the exercise of them, and the “progression of the race results from the joint efforts of all its members” (p. 202). The size of the brain “indicates its power” (p. 223).

Epistemically, phrenologists vigorously denied the social construction of behaviors. They believed that “the disposition and mental powers of mankind, are *innate*—are *born*, not created by education, and that the human mind, instead of being a blank on which education and circumstances write the whole character, has an *inherent* constitution and character of its own” (Fowler, 1843, p. 4, emphasis in original). More specifically, they believed that the qualities in a child were only passed down from the mother, and she had complete control over the character of her child. They wrote several publications giving mothers guidance to how to carry her baby in order to create the best product toward advancement of mankind. “Treatments” were restricted to physiological activities, rather than medical (such as getting fresh air, bathing in cold water, etc.).

Phrenologists connected particular gender traits to sex and noted their absence through visible clues. Fowler (1848) cites Gall’s description of subjects who have a “depraved” sense of amativeness, a faculty indicating their capacity for love: “Almost all the women abandoned in this propensity have at the same time a robust and masculine constitution. The men, on the contrary have an effeminate body; their limbs are rounded, fat, motled [sic] and small, and their breasts very conspicuous” (p. 87). A full chapter is devoted to the faculty of philoprogenitiveness or “love of offspring” in women, and is often referred to as “maternal” fondness, as if it cannot occur in a man. Some bits of support he offers are that male servants are never chosen to watch children, a poem written by a woman about saving her baby in a snowstorm, and his examination of a baboon brain (pp. 90-91). On the reverse, if men or women have small bumps in this area, often the result is infanticide. Women and the Irish are also more highly developed in the faculty of “adhesiveness” which refers to “friendship, attachment, sociability” (p. 98). He

mentions the habits formed by young women to include “their attention...to fashion, their artificial airs, their studied hypocrisy, their idleness, irregular habits, false and imperfect ideas of beauty and perfection; their tight-lacing and their wrong standard of character,” whereas young men have more “expensive, unhealthy, and demoralizing” habits, including “idleness, intemperate use of intoxicating drinks, smoking, chewing, and snuffing tobacco, the taking of opium, licentiousness in every form, gambling, swearing, prodigality, and the keeping of late hours at night” (p. 131). Though he calls these “habits” and “customs,” he worries that they will be passed along to their offspring, in which case those in possession of them should not get married.

An 1868 phrenology-based maternity guide states that “Maternity is the one destiny and function of woman—that alone for which she was created...And she is the most beautiful and perfect woman, who is fitted by nature to bear the best children; while those who are least fitted for this end, are, THEREFORE, the most homely” (Fowler, 1868, p. 50). He addresses objections by saying “Fair reader, pout and poh at this institute of nature as you will, it is nevertheless true, AND YOU KNOW AND FEEL IT. It accords with your inner consciousness” (p. 54). The language of gender in phrenology echoes the vague “law of nature” referred to in the legal discourse. The differences between genders did not seem to be physical, but physicality seemed to be the only embodiment upon which the gut-instinct “difference” could be projected. Since difference could not be explained through physiology or psychology, it was chalked up to divine law or God’s rules.

Intersex. As mentioned above, the medical discourse steered clear of gender differentiation, and focused on sex-differentiation, usually in cases of deviation from

norms. As late as 1912, texts were still being written defending the evolution of the sexes from one superior “bi-sexual” being, with bi-sexual referring to a two-sexed body rather than in current usage relating to sexuality (Buzzacot & Wymar, 1912), which means the two-sex model was still considered controversial. Where sex differentiation became most problematic for physicians was intersexuality, or then called “hermaphrodites,” or those of “doubtful sex.” In the medical sex classifications of the late nineteenth century, the structure of gender was binary (male-female/man-woman), with hermaphrodites either denied or present as a confounding curiosity.

Intersex people were written about by St. Augustine in *The City of God* in the fifth century and Aristotle in the fourth century BCE. Parsons (1741) sympathetically notes how “the learned among men... follow the Path of vulgar Errors rather than taking the Trouble to think seriously about such subject” as hermaphrodites,” although Parsons was arguing that many people were being mistakenly identified as hermaphrodites when they just had variant organs such as enlarged clitorises (p. vi). As gynecology formalized in the nineteenth century cases began to proliferate of people with variant anatomy, and thus an increase in discourse as physicians attempted to puzzle out which sex they “actually” were. They were canonical topics in medical jurisprudence literature; a sample chapter title in a textbook: “Hermaphrodites, doubtful sex, monsters” (Dean, 1866). Physicians generally were asked to decide the “true sex” so that their patients could legally get married, vote, or practice heteronormative sex (Reis, 2009). Despite the ubiquity of intersexuality throughout historical discourse, hermaphroditism was not included in Gray’s *Anatomy*, perhaps an indication that it was considered a condition or disease, not a variation.

Dreger (1998a) calls this time period the “Age of the Gonads” because gonadal tissue was considered the determining factor for sex. For example, if a man with normative genitalia and masculine behaviors was found to possess, say a stray ovary, he was considered a female pseudo-hermaphrodite. Leading up to that time, physicians mainly used gendered visual, behavioral and social clues to make decisions on sex differentiation (Reis, 2009, p. 54). Parsons (1741) describes a case where a man was mistaken for a woman merely because he sat down to urinate due to an unperforated penis, showing a case of variation that did not result in gender confusion for the subject (p. 30).

Legal discourse involving intersex people relies heavily on medical interpretations of sex, with the physician as the authority. In *Bouvier's* 1871 law dictionary, “hermaphrodites” were defined as “Persons who have in the sexual organs the appearance of both sexes. They are adjudged to belong to that which prevails in them” (p. 665). The term “adjudged” demonstrates the lack of subjectivity for the intersex person. Reis’s (2009) research shows that medical discourse tended to host debates about intersex patients, despite that the information could be second or third hand. The prose is littered with exclamation points and communicates a gossipy and incredulous tone. Taylor (1873) recounts the story of Levi Suydam, an intersex person who attempted to vote in a contested election, where two doctors squabbled for weeks as to whether Levi could vote or not, subjecting him to repeated, invasive physical examinations. Ultimately, it was decided that the physical evidence was inconclusive, so he was determined to be a woman due to his sexual attraction to males, his “aversion to” and “inability to perform bodily labor,” and the clincher, that he had “a fondness for gay colours, for pieces of calico” (p. 676). One case note describes a woman who consulted an attorney wanting to

find out if she could legally marry. He described the physical examination in vivid detail and wrote that the decision to raise her as a female was made by a nurse “though doubtful of the real nature of the case, advised female costume, which was adopted ever since” (Mann, 1853, p. 720).

If patients objected to the physicians’ determinations they were accused of practicing deception to gain privileges or commit perversions such as same-sex intimacy. Legally, concerns revolve more around property rights and fraud (such as the alleged voter fraud suspected above), rather than the same-sex intimacy that is guarded against in the medical discourse. In the same year, Taylor, in his influential medical jurisprudence text, *A Manual of Medical Jurisprudence*, using the terms “abnormal,” “defective,” “deformity,” and “the beings” to describe hermaphrodites, writes that it is “not easy to assign a sex, but this is of minor importance.” He goes on to say that the more important issue lies in just identifying the degree of malformation, as that determines potency, which then can uncover fraud in paternity or provide grounds for divorce (Taylor, 1873, pp. 696-697).

Cases such as Levi Suydam’s voter fraud case highlight the arbitrariness of prohibitions based on sex. The legitimacy of a vote hinged only on the disputed determinations of physicians. An earlier edition of *Bouvier’s* from 1856 describes the story of a Dr. William Harris, who had delivered a lecture about a “supposed hermaphrodite,” who “till the age of eighteen, wore the female dress, when she threw it off, and assumed the name of Rees, with the dress and habits of a man; at twenty-five, she married a woman, but had no children. Her clitoris was five or six inches long, and in coition, which she greatly enjoyed, she used this instead of the male organ. She lived till she was sixty years of age, and died in possession of a large estate, which she had

acquired by her industry and enterprise” (n.p.) Given the gendered behaviors of marrying a woman, dress and habits of a man, and being in possession of masculine industry and enterprise, the use of the feminine pronoun shows the supremacy of the physical body at the time in determining rights.

Contradictions arose regularly whenever physicians attempted to assign necessary and sufficient conditions to a sex. In *Bouvier's*, the definition for “hermaphrodite” goes on to explain, “The sexual characteristics in the human species are widely separated, and the two sexes are never, perhaps, united in the same individual,” and refers to a physiological text as the source. This “wide separation,” then is immediately contradicted in the following sentence: “Cases of malformation, however, sometimes are found, in which it is very difficult to decide to what sex the person belongs” (1870, p. 665). For example, Taylor (1873) offers that women can be identified by breasts, vaginas, uterus and ovaries (p. 675), are “irritable and vain” and have “shrill and squeaking voices” (p. 679). Males can be identified by “a grave tone of voice, the presence of a beard, the width of the shoulders and the narrowness of the pelvis” (p. 669), although he describes a woman who had an “abundance of beard and profuse whiskers,” but no other external variation and a Roman countess he knew “had so much hair upon her chin she was obliged to shave like a man” and finally admits, “in some cases external examination will entirely fail to indicate the sex” (p. 671). He describes a person with no external sex organs, and concludes, coldly, “this person must be placed among those monstrous subjects, in which there is, properly speaking, no sex, and which therefore cannot enter a marriage contract with either a male or a female” (p. 281), but it is not grounds for being denied inheritance (p. 282).

The binary division of sexes that in more recent history has been exacerbated through sex classification on identification documents had not yet become a controversy. During this timeframe, no common identification documents existed in the U.S. except passports, which the federal government took over processing in 1856. Regardless, few people possessed them, as foreign travel was rare (Spade, 2008, p. 774). Consequently, sex on ID cards had not yet arisen as a problem; however, it led to other problems, as when people with uncertain gender (that is, someone cannot tell by looking) could not simply show an ID when voting or claiming other rights, such as Levi Suydam. Sex-segregation in prisons was fairly new, beginning in 1830, with only Mount Pleasant Female Prison that opened in 1839 in New York, and The Indiana Reformatory Institution for Women and Girls (men, women and children were housed together until separate facilities began to be built) (Spade, 2008, pp. 780-781). Prior to the Civil war, rural and poor people could cohabit in “self marriages,” or unregistered marriages where two women might marry with one cross-dressing as a husband, with neighbors either expressing no suspicion or perhaps just ignoring it. After the Civil war, however, the legality of marriages were monitored more closely (Coontz, 2005).

Trans people. At this point in time, the concept of transgender was lumped into a category called “concealed sex.” Despite their gender identification, trans people generally could be matched to male or female genitalia and other physical markers (hormone therapy was still 60 years off and gender was generally expressed through cross-dressing), and the psychological aspects of gender were yet to be acknowledged; thus, little medical literature refers to it. Concealed sex does not appear in the legal dictionaries and only in the medical jurisprudence texts in passing, as no one could

identify any illegality unless fraud was committed. Taylor (1873) writes that it “belongs in the annals of imposture rather than medical jurisprudence” (p. 678). Despite the relative inattention at this time, in the next century trans people would come to dominate gender-related discourse.

Social Context 1958-1965

Though no change occurred in sex and gender classification of the *DDC* until 1965, between 1885 and 1958 conceptualizations of sex and gender dramatically transformed, especially concepts related to sexuality. Though the amount of discourse likely did not change, it took on a different tenor based on advances in medicine and psychiatry. Psychiatry, which had previously been relegated to “curing” marginalized prisoners in insane asylums, began to be viewed as a public health benefit and, informed by psychology and psychotherapy, was applied more broadly to a wider array of contexts (Schmeiser, 2013, p. 179). Phrenology had lost favor by this point and had faded away. Early in the century, the discovery of chromosomes influenced how “true sex” was determined (Rosario, 2007, p. 266), thus leading to the genetic age, still a factor in determining sex. Krafft-Ebing’s landmark medical jurisprudence text, *Psychopathia Sexualis*, was published in English in 1906, and it focused on “sexual deviance,” outlining hundreds of sexual practices, including cross-dressing, which he calls “effeminization,” and restricts to homosexuals. Though it refers to “sexual crime,” the preface notes with sympathy “suffering and affliction” and wishes “solace and social elevation to its readers” so they did not feel alone (p. viii). In 1910, “transvestite” was coined by German sex activist Magnus Hirschfeld to mean someone who wore the clothes of the other sex, distinguishing it from homosexuality, for which he energetically advocated decriminalization and rights. Havelock Ellis (1936) coined the term “eonism”

to denote cross-dressing, also to distinguish it from homosexuality. He had originally used the term “sexo-aesthetic inversion,” but decided it confused the concept with homosexuality, then called “inversion” (Bullough, 1997). Kinsey’s research on sexuality began in 1938 and continued through the early 1960s, with (best-selling) major reports published in 1948 (*Sexual Behavior in the Human Male*) and 1953 (*Sexual Behavior in the Human Female*), surprising the public with the revelation of a variety of sexual practices.

Following this period, research was dominated by the theories of Freud, and most sought a “cure” for what were considered deviant practices through psychotherapy or aversion therapy, which involved pairing cross-dressing behavior with negative experiences such as shock therapy or forced vomiting (Green, 2010, p. 1458). Freud and his followers generally argued that cross-dressing resulted from the anxiety a boy experienced once he realized his mother did not have a penis (Bullough, 1997). Robert Cauldwell (1949) wrote about the rehabilitation of transvestites in his paper *Psychopathia Transsexualis*:

Although heredity had a part in producing individuals who may have psychopathic tendencies, such pitiful cases as that described herein are products, largely, of unfavorable childhood environment and overindulgent parents and other near relatives...Progress is being made. Within a quarter of a century social education may serve as a preventive in all but a few cases and social organizations may be able to rehabilitate the few who fall by the wayside. (p. 280)

During this period, experimentation with transsexual surgery and therapy increased.

Sexologist and endocrinologist Harry Benjamin, who had been working on transvestism

and transsexuality since the early 50s, arranged a symposium on the topics in 1953 where he argued that rehabilitation is fruitless, thus positioning himself as a patient advocate and the receiver of an avalanche of referrals for hormone therapy. The first failed sex assignment surgery—the intersex patient, Lili Elbe, died—was performed in Germany in 1931 and the “true story” was published in English in 1933. The news of Christine Jorgenson, the most widely publicized American to undergo a sex change, was first announced in 1952 with a resulting media circus, and it inspired a mass of inquiries into sex reassignment surgery referrals and had resounding effects throughout the 60s and 70s (Meyerowitz, 2002).

The Civil Rights Movement and the second wave of the Women’s Movement also were taking shape. During World War II, law firms were forced by necessity to hire women to replace men who had gone to war, yet they were hired provisionally, were segregated from men, were hired as legal assistants and secretaries (Bowman, 2009, p. 6). This led to a surge of legal discourse that defined women in terms of why they should not be practicing law. Harvard Law School’s dean, when asked about how bad the shortage of men was on law school enrollments, replied that it was not as bad as they expected, as “we haven’t had to admit any women” (as cited in Bowman, 2009, p. 7). Despite having access to the profession and potentially a speaking part in the legal discourse, without legal protections, they could not advocate for themselves. Epstein (2012) calls the 1950s and 1960s the “dark days” for women lawyers, citing a study where women were rated the least desirable candidates for law jobs, even lower than Catholics, Jews, or blacks and since they were legally unprotected, they had no recourse (p. 84). For example, during this timeframe, Ruth Bader Ginsberg, Geraldine Ferraro, Elizabeth Dole and Janet Reno

were all also rejected from employment at major firms solely for being women, and Sandra Day O'Connor was offered only a legal secretary position, despite all graduating from elite law schools (Bowman, 2009, pp. 9-10; Epstein, 2012, p. 85).

In 1949, anthropologist Margaret Mead had distinguished “sex” from “sex role.” Margaret Sanger began seeking researchers to develop a birth control pill in 1950, and the pill went on the market first in 1957 as treatment for menstruation problems and then in 1960 as a contraceptive, although remaining illegal in 8 states as of 1964. Its legality was settled as a privacy issue by the U.S. Supreme Court in *Griswold v. Connecticut* (1965). *The Second Sex* had been published in the US in 1953, with de Beauvoir’s famous exhortation, “One is not born, but rather becomes, a woman” (1974, p. 301). Mary Tyler Moore first wore pants on television in 1961, *Sex and the Single Girl* was published in 1962, and *The Feminine Mystique* was published in 1963, causing the advertising and mass media industries to begin self-examination of its depictions of women. Books such as *The Natural Superiority of Women* (written by a man, Ashley Montagu) began to appear. Television ownership was becoming more widespread, with the first television commercial appearing in 1941 (Stewart, 1941, p. 129).

The discourse over this time period suggested that American masculinity had been compromised (Courdileone, 2000). In 1958, Arthur Schlesinger’s “The Crisis of American Masculinity” was published in *Esquire*, and a series appeared in *Look Magazine* called “The Decline of the American Male” (p. 522). The corresponding tail end of the McCarthy era of the early 50s had focused on communists and others with loose morals—namely, homosexuals—resulting in the “lavender scare,” where gays were rooted out of government positions through a series of executive orders and mass firings

starting in 1953. Legislation and the resulting legal challenges, led by the Mattachine Society, focused more on sexual orientation than gender as the ousted gay workers fought back (Johnson, 2004). In the media, when referring to the curious phenomenon of transsexualism, most of the attention was paid to male-to-female (MTF) rather than female-to-male (FTM) trans people, and they were often sexualized, which led to further fear about homosexuality. Pulp entertainment outlets capitalized on the popularity of Christine Jorgenson, including publishing novels about sex-changes and producing a B-movie called *Glen or Glenda?*, directed by Ed Wood (Meyerowitz, 2002, p. 89). Often, the transgender/transsexual publicity materials described MTF performers such as Christine Jorgenson and the many Vegas performers she inspired as former G.I.s or other “manly men” who had suddenly changed, again fueling the fears of the decline of masculinity.

Courdileone (2000) identifies the common motif as inspired by the communist threat, where “American males had become the victims of a smothering, overpowering, suspiciously collectivist mass society—a society that had smashed the once-autonomous male self, elevated women to a position of power in the household and doomed men to a slavish conformity” similar to those living in communist regimes (pp. 522-23). The undermining of monolithic masculinity resulted in both fascination with and persecution of trans and intersex people. The public’s now-shaken belief in “natural” sex and gender categories caused anxiety for those who identified with their gender and great relief for those who did not.

Medico-legal Metanarrative 1958-1965

The questioning of masculinity, the rise of attention on women's and gay and lesbian rights, and the intense publicity on Christine Jorgenson were accompanied by a burst of research as doctors, psychologists and scientists worked on concepts of sex and gender in the 50s and 60s. Because researchers could not identify a physiological cause for such behaviors as transvestism or transsexuality, sex psychology gained credibility, originating with Freud's theories of sexuality and fetishism, morphing into the field of sexology. The Johns Hopkins psychologist John Money and his ideas most significantly influenced concepts and treatment of sex and gender throughout the latter half of the twentieth century and are still cited today, despite intense criticism.

Men and women. Money (1955) first used the linguistic term "gender" for a more nuanced distinction between what Mead had called sex and the sex role, or in other words, to distinguish "male" from "masculinity" and "female" from "femininity." Consequently, definitions of sex and the newly-minted term "gender" started to consider psychosocial factors and minimize the influence of biology. His concepts of gender and gender identity were embraced by feminists because they eliminated the possibility of biological determinism, where one's destiny was determined by sex. By this time the psycho-social had become a standard ingredient in sex. Stoller & Rosen (1959) include "chromosomes, gonads, hormones, sex organs, and psychic pattern" in their definition of sex, writing that "the essential criterion is the strength of the patient's identification with one sex or the other" or their gender identity (p. 261).

While these developments were occurring in medicine and psychology, the legal scene remained relatively quiet. The legal dictionaries had not been revised since the 30s

and 40s. In the newer editions of *Black's*, which gained dominance that has continued to the present day, the definitions were shorter, whereas *Bouvier's* dictionary, which was predominately used prior to 1940, was expanded into an encyclopedia. Consequently, *Bouvier's* contained more opportunities for editorializing, although the editors note, "there must necessarily be some imperfections," and just hope it is "useful" ("Preface," 1948). In the 1951 edition of *Black's*, the definition for "sex" was taken from *Webster's Dictionary* rather than case law, statutes, or medicine: "The sum of the peculiarities of structure and function that distinguish a male from a female organism; the character of being male or female" (p. 1541). "Character" seems to indicate an acknowledgement of gender role, but "women," remain biological, as merely "all the females of the human species...who have arrived at the age of puberty" (p. 1779). Entries for "Husband," and "Wife," note that they are correlatives of each other (thus excluding any notion of same-sex marriage). The entry for "Husband and Wife" proclaims it "one of the great domestic relationships," where "the legal existence of a wife is incorporated with that of her husband" (p. 875). *Bouvier's* contains many of the same elements as the previous edition; however, an acknowledgement of growing women's rights begrudges, "formerly, he might use such gentle force to restrain her of her liberty...but now this is otherwise" (1948, p. 512). However, he may restrain her from "committing a crime" or interfering with the exercise of his parental control over his children." It also warns that "any chastisement inflicted on the wife renders him guilty of assault and battery" (p. 512), which had not had been a concern in the past.

"Marriage," however, newly notes twice that it is the "relation of one man and one woman" and that it is "founded on the distinction of sex," cementing

heteronormativity (p. 1123). *Bouvier's* (1948) makes great pains to indicate that marriage “is something more than a civil contract” despite several states considering it such, and more than mere “temporary agreement to dwell together for a time for the gratification of sexual desires” (p. 758). “Married woman” as opposed to “wife” has much more extensive definitions, two full pages’ worth, mostly indicating specific direction for property disputes with husbands.

However, since social norms were shifting, more women were educated and expected to use their educations in a profession. The circumstances that women met in their workplaces underscored the condition of inequality. During this timeframe, World War II had caused shortages in both physicians and attorneys (as well as other male-dominated fields), which provided unprecedented opportunity for women to enter practice (Bowman, 2009, p. 3). Women joined the discourse of their respective fields, providing them somewhat of a voice, yet during this timeframe prior to the Civil Rights Act of 1964, they had access and more voice, but few legal protections, being offered lower salaries, no partnership opportunities, and general disrespect and discrimination in their workplaces. Women’s rights elsewhere followed suit. Though they had access, they were made to feel unwelcome and incompetent in institutions previously restricted to men. Though women were legally allowed to serve on juries, they were rarely called because although the U.S. had experienced the “enlightened emancipation of women from the restrictions and protections of bygone years, and their entry into many parts of community life formerly considered to be reserved to men, woman is still regarded as the center of home and family life” (*Hoyt v. Florida*, 1961), which allowed the automatic exemption of women from jury duty because of presumed family responsibilities. The

legal discourse took a vicious and insulting turn in tone compared to the nineteenth century discourse, which, however misdirected, celebrated so-called “women’s characteristics.”

With women’s admission to the medical institution no longer an issue, the debate shifted from whether to admit them to the field to the competence of those in the field. Echoing conditions in the legal field, a 1959 editorial in the *Journal of the National Medical Association*, the journal of the organization for African-American physicians, points out the insidiousness of discrimination against women physicians—that it is worse than that against black physicians—and that in the NMA, “equal recognition is extended to all members based on merit” rather than sex or race (“Our Lady Members,” 1959, p. 306). In the AMA, one woman served as a delegate from 1958-1968, but an official antidiscrimination statement from the AMA would not appear until the 1970s.

The impact of the Civil Rights movement was felt in legislation for women’s rights. The Equal Pay Act of 1963 stated:

No employer ... shall discriminate...between employees on the basis of sex by paying wages to employees in such establishment at a rate less than the rate at which he pays wages to employees of the opposite sex in such establishment for equal work on jobs the performance of which requires equal skill, effort, and responsibility.

The next year, the 1964 Title VII of the Civil Rights Act was passed, which prohibits discrimination for specific protected classes, including sex, race, color, religion and national origin and established the EEOC. Section k read:

The terms “because of sex” or “on the basis of sex” include, but are not limited to, because of or on the basis of pregnancy, childbirth, or related medical conditions; and women affected by pregnancy, childbirth, or related medical conditions.

However, inclusion in the Civil Rights Act was not considered a foregone conclusion for women. The process of getting the Civil Rights Act passed pitted white women against people of color, and “sex” was added as a last moment addition, some argue in an effort to kill the bill (Menand, 2014). Eight civil rights acts were passed between 1866 and 1991, and the 1964 act was the only one that mentioned sex. The second wave struggle for women’s rights was just beginning and would accelerate into the 1970s.

Intersex. Intersex people continued to attract attention, even more publicly than in the past. Money’s 1952 Harvard dissertation, *Hermaphroditism: An inquiry into the nature of a human paradox*, studied the psychological aspects of intersexuality and led to a partnership with psychiatrists Joan and John Hampson. In a study of 105 intersex people, they found that 95 percent identified with the gender under which their parents had raised them (Money, Hampson & Hampson, 1957). This led them to believe that sex could be surgically created and gender could be psychologically reinforced. Though the predominant term used was “hermaphrodite,” an increasing amount medical texts such as *Hermaphroditos: the Human Intersex*, an endocrinology text from 1946 and a urology text from 1962, *Human Intersex*, show the current usage of “intersex” emerging.

Highly prolific, Money published dozens of articles over this timeframe and made several television appearances, advocating for the “neutrality-at-birth” viewpoint, arguing that intersex babies could be assigned a convenient sex at birth, the sex surgically reinforced and the gender socially reinforced. He was heavily influenced by Freud and

consequently the presence or absence of a penis weighed heavily on the decision making. For example, Money and his followers would recommend boys born with a small or no penis to be “assigned female sex, undergo surgical feminization, and be raised as a girl” to avoid the “intolerable psychic burden” of possessing a small penis (Rosario, 2007, pp. 263, 267). Since constructing a vagina rather than a functioning penis is surgically easier, the particular circumstances were often dictated by the convenience of the medical team. This development led to the rise of the influence of psychiatrists, as they became experts in determining “optimal sex,” and thus provided recommendations to surgeons and endocrinologists. “True sex,” then, was abandoned, and the “best” sex for the circumstances became what was sought. Thus began what Dreger (1998a) calls “The Age of Surgery” because surgical “correction” advanced to a point where it became the standard of care for intersex people.

In *Bouvier's Legal Dictionary*, a “hermaphrodite” was called “A person of doubtful or double sex; one possessing, really or apparently, and in more or less developed form, some or all of the genital organs of both sexes” and had no referent (1948, p. 860). A medical jurisprudence article from 1960 used surprisingly current terminology—intersex and sex variation—for the first time describing medical rather than social methods of sustaining a particular sex. It describes how, historically, intersex people “were allowed” to choose their desired sex, but dismisses the value of self-authorship. Echoing John Money, the authors recommend a more “common-sense” method where the “physician consult[s] with the parents to decide which physical and psychic sex the individual resembles more closely and then, by surgery and endocrine treatment...help the individual develop as far as possible as a member of that sex” (Bowman & Engle, 1960, p.

295). The urge to uncover “true sex” continued, under the auspices of finding “optimal sex.”

Trans people. The term “transgender” still would not be coined until the 70s and not used widely until the 1990s, but the concept was gaining prominence, and the nuances began to be differentiated during this time period, including separating it from homosexuality. “Transvestism” and “transexualism” (with one “s”), in Cauldwell’s 1949 usage, were overlapping concepts respectively referring to occasional cross-dressers and those, usually men, who felt they were in the wrong gender. A column in the *LA Times*, written by an emeritus consultant at the Mayo Clinic, points out that “transvestites aren’t homosexuals,” and either way, as a physician, he did not “see how a youth could be injured by having a homosexual experience” (Alvarez, 1957, p. B28). The terms eventually separated themselves as sex reassignment surgeries became more common and the term came to mean those who had actually transitioned beyond cross-dressing. Throughout the 60s, transsexuality was considered “an intense, usually obsessive, desire for a complete sexual transformation” through surgery or other means (Bowman & Engle, 1960, p. 306). Burchard (1965) completely separated the concepts into two distinct syndromes, arguing that transvestism usually occurred in the home, transvestites typically identified with their birth sex in the course of everyday life, and that no further progression to transsexuality typically occurred. In his categorization of transvestites, Benjamin (1954), an endocrinologist, echoing language used about women, noted the feminine “constitution” of transvestites, but unable to pin it on a physical cause, suggests a “chromosomal sex disturbance” and calls it “psychic hermaphroditism” (p. 223).

Freud's influence resonated when speculating on the causes of transsexuality. Brown (1960) notes that biogenetic explanations for trans behavior were popular because subjects recall feeling mis-gendered from as long as they can remember; however, he writes that conditioning from parents caused an "imprinting-like process to occur" when parents praise children during early cross-dressing experiences (p. 221). Psychotherapists appeared to have taken up the mantle of mother-blaming from phrenologists. Brown goes on to blame "immature, narcissistic, selfish, chronically unhappy" women for encouraging transvestism in their children. Fathers contribute through either absence or active dislike of their children (p. 221). Stoller's views, too, changed from initially crediting biological influences to parenting, and in particular drawing a connection between mothers and the effeminacy of boys (Rosario, 2007).

American physicians felt the impact of Christine Jorgenson's 1952 sex reassignment almost immediately, though it was conducted in Denmark. Now that it was a realistic possibility, potential patients rushed to doctors to request sex reassignments with a sense of urgency that took them by surprise. Jorgenson's Danish surgeon, Christian Hamburger, received 765 letters from 456 people requesting the surgery, nearly half from the U.S. (Hamburger, 1953, p. 363). Worden and Marsh (1955) wrote, "After the publicity in recent years about such operations, there have been increasing numbers of these men banging on the doors of surgeons insisting that they have the operation" (p. 1292). On the referrals of Hamburger, Stoller and others, hundreds of potential patients were triaged by Harry Benjamin, the endocrinologist and sexologist who had argued against rehabilitation of transsexuals. Benjamin (1954) argued, "All therapy, in cases of transsexualism—to the best of my knowledge—has proved useless as far as any cure is

concerned. I know of no case where even intensive and prolonged psychoanalysis had any success” (p. 228). Thus, he prescribed hormone treatment and referred them to sympathetic surgeons, wherever they could be found, but warning that “castration produces a eunuch and not a woman” (p. 229). Meyerowitz (2002) describes how transsexuals offered themselves as research subjects, partly in an effort to get free treatment, but also to educate physicians, promote understanding and disassociate themselves with deviancy (p. 155).

During this time period, the U.S. had begun a movement toward standardization as a means for the state to measure and regulate its economic interests. By 1954, driver’s licenses were required in all 50 states. Birth registry, though existing in some form or another since the 18th century, rose to 98 percent of births registered in 1950 because birth certificates became newly required for such activities as collecting social security benefits and ration books, school registration, and citizenship verification (Spade, 2008, pp. 765-766). All of these documents require sex to be identified, with only two options: M or F. Since this corresponded with the rise in sex reassignment, Benjamin and other doctors began to provide letters to certify that transsexuals were undergoing medical treatment to transition and that they should be legally treated as their new sex so that they could change their birth certificates (Meyerowitz, 2002, p. 165). At this point, the legal codes did not provide direction for amendment of documents specifically related to sex, so it was up to the discretion of the agency clerks to allow or disallow. Often, policy must be administered and enforced by low-level bureaucrats with personal biases or ignorance of the policies they must uphold, which leads to inconsistency.

Though not explicitly illegal, trans behaviors were subsumed under the umbrella of other crimes through creative interpretation of the criminal code. The English common law crime of “mayhem” was threatened to surgeons to prevent them from castrating their MTF transsexuals. Mayhem, legally defined as “Unlawfully and violently depriving the use of such of his members as may render him the less able in fighting,” and the law considers one who “disables, disfigures, or renders [a member] useless, or cuts or disables the tongue, or puts out an eye, or slits the nose, ear or lip” guilty of mayhem (*Black’s*, 1951, p. 1131). However, for mayhem to legally be committed, it must be “malicious and willful” (*Brown v. United States*, 1949), which did not apply to consensual surgery. A medical jurisprudence article mentions that mayhem laws were “extended to include any willful disfigurings of the body” to include castration or removal of healthy organs or tissue (Sherwin, 1954, p. 243). Though no doctors were ever charged with this, many were sufficiently threatened to prevent them from doing surgery, despite doing the same to intersex patients without hesitation. In many cases, surgeons required evidence of intersexuality to justify surgery (Meyerowitz, 2002, p. 122). In medical jurisprudence, Bowman and Engle (1960) admit that the mayhem laws are a stretch, but that it is all that is available “for want of a suitable modern law” (p. 307). They could only pull together a few instances of particular cases, rather than a body of work indicating a consistent view.

A similar stretch was needed to convict people for trans behavior. For example, public cross-dressers were often subject to vagrancy statutes such as New York’s 1958 Criminal Code, which defined a vagrant as “a person, who, having his face painted, discolored, covered or concealed or being otherwise disguised, in a manner calculated to prevent his

being identified” in public places (New York Code of Criminal Procedures, 1967). In pointing out the need for reform in American sex laws, Ploscowe (1960) writes that “sexual activity is largely private” and thus the unenforceable, inconsistent illegality of private, consensual acts were indications of American naiveté vis-à-vis the more liberal English law and needlessly harmed such people as transvestites and adolescents (pp. 217-218).

Also showing the influence of psychology, the courts began to include psychological evaluations or personality inventories to measure masculinity or femininity through a multitude of methods, from figure-drawing, to list-making to scales. However, they were also commonly used to detect perversion in the form of homosexuality, such as in the case of *People v. Barnett*, where a man was accused of pedophilic behavior. Rather than being called a pedophile, his supposed feminine qualities were identified as products of a “congenitally bad brain and glandular makeup under the influence of the bad habits of a corrupt environment.” Because his body was womanly, as was his mind, as proven by psychological survey:

Just as nature has broadened his pelvis . . . so has nature made him associate words one with the other in a feminine rather than masculine way. Given him the visual imagery of a woman, caused him to seek and retain knowledge that is feminine, caused him to respond to anger provocations more as a woman than a man. Given him likes and dislikes of a great number of sorts, which are common to the female rather than the male. Forced him to choose material for art work, writing, studying, travelling, in a female manner in the ratio of 10 to 2. Nature has so built him that authoritative scientific tests of the total masculinity or femininity

in his nature given him a score 85 points away from the average masculine score. (Male average 52: female average 70: Barnett's score — feminine 33) Such a long list of abnormalities, variations or perversions of mind indicate ‘certain elements of mental disorder.’ (*People v. Barnett*, 1946)

Though the inclusion of self-reported data is an important move toward agency, the scores pointed to the stereotypical behaviors associated with each gender, implying that those behaviors were somehow inherent to men and women. As an example of the many personality inventories that sprung up during that time, the Guilford-Zimmerman Temperament survey (1949) measured masculinity by positioning femininity as a failure of masculinity. The questionnaire asks questions such as, “The sight of ragged or soiled fingernails is repulsive to you,” and “The sight of large bugs and spiders gives you a ‘creepy’ feeling.” “You would rather be a building contractor than a nurse,” “You would rather go to an athletic event than a dance.” “You would rather be an interior decorator than an architectural engineer,” “You cry rather easily,” and “Odors of perspiration disgust you.” The characteristics listed below describe what personality traits make one masculine, according to the survey:

Masculine

Interest in masculine activities and vocations

Not easily disgusted

Hardboiled

Resistant to fear

Feminine

Interest in feminine activities and vocations

Easily disgusted

Sympathetic

Fearful

Romantic interests

Inhibition of emotional expressions	Emotional expressiveness
Little interest in clothes and styles	Much interest in clothes and styles
	Dislike of vermin

Not only is femininity positioned as a deficit of masculinity, but also the “feminine activities and vocations” reinforce stereotypical behaviors and desires as an inherently female and does not acknowledge the social limitations at play.

Social Context 1971-1979

The upswing of second-wave feminism, as well as momentum in psychiatry, psychology, and sexual medicine led to some of the most influential advances in medical and psychological research relating to sex and gender in the 1950s and early 60s.

However, these advancements in combination with legal blowback from the 1950s were just the nascent beginning of a torrent of activity in the next decade. During the 1970s, conservative forces pushed back against many of the liberalities of the 1960s. The Vietnam War was winding down; the Kent State shootings occurred in 1970. The Equal Rights Amendment finally passed in 1972 (but failed to be ratified). *The Joy of Sex* was published in 1970. *Ms.* magazine launched in 1972, and in that same year, Shirley Chisholm, a black woman, ran for U.S. President.

The women’s movement became a central theme in advertising, and Bradley (2003) describes how the industry found itself the target of vocal critique by women’s groups such as NOW, who focused shaming campaigns on the agencies behind sexist or exploitative advertisements. In 1968, Virginia Slims’ “You’ve come a long way baby” campaign was launched, and though it purportedly celebrated feminism, it was criticized for adopting the movement for commercial gain. An airline campaign caused outrage by

suggesting businessmen “fly” airplanes with female names (Bradley, 2003). Starting with Friedan’s critique of mass media in *The Feminine Mystique*, the industry began to look inwardly by evaluating its practices related to women and encouraging more women to the industry. An ad in *Advertising Age* in 1970 proclaimed “The Lady of the House is Dead” and asked that women be treated with more respect in advertising campaigns, rather than as silly, sexual housekeepers (27 April, p. 86). In 1972, AT&T depicted a female telephone line installer, and in 1978, the Enjoli perfume ads debuted, featuring a woman who could “have it all:” be feminine, run her household, and work outside the home.

Radical feminism also responded to the idea of assimilation by positing separatism and androgyny as solutions. Throughout the 1970’s, a number of writings about androgyny were published. Radical Kate Millet (1970) argued in *Sexual Politics* that the patriarchy maintains control by emphasizing biological difference. Millet advocated for a style of androgyny that took on the strongest traits of masculinity and femininity. Also in 1970, Shulamith Firestone’s *The Dialectic of Sex* appeared, also arguing for androgyny, but an all-encompassing physical androgyny that relied on technology to remove the burden of reproduction from women. Heilbrun’s (1974) *Toward a Recognition of Androgyny* also appeared during that timeframe. At the same time, radical feminists regularly debated transsexualism’s relationship to feminism. Trans people were active in the Stonewall riots of 1968, and MTF trans individuals attempted to participate in the feminist movement, but were not fully embraced by feminists or the gay rights movements (which were also suspicious of each other) (Greenberg, Herald & Strasser, 2010, p. 15; cf. Raymond 1977, Raymond, 1979). The Combahee River

Collective issued their statement on black feminism in 1974, articulating the complaint that academic feminism presumed affluent whiteness and leading to later recognition of intersectionality.

The period shortly after the seventeenth edition of the *DDC* was published was one of the most active times for medical sex and gender research. In 1965, the Gender Identity Clinic at Johns Hopkins University opened, propelled by John Money and surgeon Claude Migeon, and surgeons there began performing experimental sex change surgeries, although clients found that the clinic's focus was more on sexuality rather than gender identity (Buckley, 1966; Witkin, 2014). John Money published prolifically prior to and throughout this time period, (amassing almost 1,200 publications in his lifetime) as he refined the conceptual distinction between "sex" and "gender" "gender identity" and "gender role" first articulated by him in 1955. Though Money's theories changed the paradigm or episteme of sex and gender conceptualizations, critics abounded. In 1965, the first article by Milton Diamond, another sexologist who became Money's lifelong gadfly, rival, and eventual debunker appeared. Another critic, Armstrong (1966) argued that gender reassignment at any point, not just at birth, was psychologically feasible, and included a testimonial, written by a patient. He pointedly writes:

1. Psychological sex and sexual behaviour are not solely dependent upon environmental psychological factors such as the sex of rearing but also upon physical aetiological factors, and both physical and environmental conditions play a part.
2. Reassignment or "change of sex" is not necessarily an extreme psychological hazard and psychologically injurious. (p. 1256)

Undeterred, in 1967, John Money undertook his most famous project, in which he engineered the sex and gender of Bruce Reimer, an identical twin whose penis had been burned off in a circumcision accident as a baby. As a non-intersex, infant twin, Reimer presented the perfect opportunity to test the neutrality-at-birth hypothesis since his brother could serve as the control group and he was still unaware of his gender. Money had a surgeon castrate the infant so that he could no longer produce sex hormones, and began therapy to raise him as a girl named Brenda (John/Joan, in the parlance of Money's research). As required by his neutral-at-birth hypothesis, Money instructed the Reimers never to reveal that Brenda had been a boy, or the gender change would fail. According to Money's research reports, Brenda responded well to being a girl, thus proving his theory, although this would be eventually disputed.

After the relative legal quiet of the 1950s and 60s, the 70s brought on an explosion of jurisprudence and finally a revision of *Black's Legal Dictionary* (*Bouvier's* had begun to recede in popularity). The introduction to *Black's* recognizes the fallibility and temporariness of the law in the introduction: "A word, in the often quoted dictum of Mr. Justice Holmes, is 'the skin of a living thought,' and the words of statutes and judicial opinions reflect the contemporary thinking of legislators and jurists" (*Black's*, 1968, p. III). Legal decisions regarding sex and gender made during this timeframe have been influential even until the present day.

Medical-legal Metanarrative 1971-1979

Men and women. Money's influence was at its peak during this timeframe. Both sex and gender came to be considered learned behavior. Money and Ehrhardt (1972) announced the success of the Reimer case in their landmark and best-selling book, *Man & Woman, Boy & Girl*, stating that children who have undergone surgery and hormone

therapy will unproblematically transition to the chosen gender, as long as they remain ignorant of their original sex. They write, “For the ordinary little boy growing up, everything pertaining to the female gender role is brain-coded as negative and unfit for use” (p. 19). But “brain-coded” means that they are following a gender “template” set forth by the models in their life. No consideration was given for their chromosomal or anatomical sex. Money (1973) described how androgen “instructs” the nervous system to lean toward gendered behavior, such as “vigorous, competitive energy,” “dominance assertion,” and “parentalism” in children’s play (p. 7). Once the genitalia are developed, the next set of “instructions” comes from the social input of the people around the child who react to the external genitalia by shaping gendered behavior. Inconsistencies in this behavior lead to behavioral confusion, but can be changed by “social or cultural decree” (p. 8). Parents of intersex children were required as part of the treatment to strongly reinforce the gender roles. He writes, “The less the experience of ambivalence in the sex of rearing, the less the chance of developmental ambiguity of gender identity/role” (Money, 1976, p. 154).

More shifts in thinking occurred elsewhere about traditional gender roles, particularly as women entered institutions where they had previously had little voice. Though the Civil Rights Act had been passed, the legal discourse had not changed the behavior of the major law firms, or other employers, for that matter, who were still openly making hiring decisions based solely on sex, asking applicants if they were planning on having children, telling them outright that women will make less than men, or stating flatly that they do not hire women (Bowman, 2009, p. 14). In the 1970s, black women lawyers had a better chance of being hired than white women and black men

lawyers. As one black woman lawyer in 1972 put it, “I’m a show woman, and a show nigger, all in one salary” (as cited in Epstein, 2012, p. 88). Their intersectional identities provided showpieces for law firms to demonstrate their compliance with diversity hiring.

In 1975 a class-action suit was filed based on this conduct by women law school students as well as the miserable treatment for those actually hired. The case was by chance assigned to a black woman judge, to the dismay of the defendants, who moved that she recuse herself because as a woman she would exercise “extrajudicial bias.” In other words, they wanted a woman’s subjectivity removed from the discourse about women. The case was settled in 1977 in favor of the women plaintiffs after a long, bitter, and childish struggle, with the judge writing that the defense’s “squabbling and hostility impeded the progress of the litigation and unduly burdened the court counsel” and reprimanded the defense for calling the women’s attorney a “Yahoo” (*Blank v. Sullivan & Cromwell*, 1975). This resulted into a surge of women gaining entrance into the profession; however, the “othering” was successful, and the result was that more acrimony ensued within firms as the discrimination went underground, and women began to leave after an average of three and a half years due to poor treatment, incompatibility with the climate set by the men (golf, dirty jokes) and the perceptions of them as incompetent because of commitment to family (Bowman, 2009, p. 15). They could not accept their role as “other” and left. Equal treatment was not addressed until 1977 with the first sexual harassment case. This case echoes many other sex-discrimination employment cases of the era, such as *Bowe v. Colgate-Palmolive* (1967), in which Colgate-Palmolive terminated a group of women from their factory jobs in order to protect them from the physical conditions, but kept all the men. Jury duty was finally

compulsory for women with *Taylor v. Louisiana* (1975), where difference is still admitted, but for the purpose of inclusion instead of exclusion:

The thought is that the factors which tend to influence the action of women are the same as those which influence the action of men—personality, background, economic status—and not sex. Yet it is not enough to say that women when sitting as jurors neither act nor tend to act as a class. Men likewise do not act as a class. But, if the shoe were on the other foot, who would claim that a jury was truly representative of the community if all men were intentionally and systematically excluded from the panel? The truth is that the two sexes are not fungible; a community made up exclusively of one is different from a community composed of both; the subtle interplay of influence one on the other is among the imponderables. To insulate the courtroom from either may not, in a given case, make an iota of difference. Yet a flavor, a distinct quality, is lost if either sex is excluded.

In 1974, psychologist Sandra Bem, an advocate for androgyny, complained about how psychological research and the multitudes of sex inventories that had sprung up in the previous decades treated masculinity and femininity as “bipolar ends of a single continuum,” which resulted that an individual had to be one or the other, but could not be both (p. 155). Thus, she created her own inventory, the Bem Sex Role Inventory (BSRI), that acknowledges feminine traits, masculine traits and a new addition of androgynous traits, or those not associated with a particular gender. Bem also acknowledges that the characteristics listed in the inventory are not meant to be considered *inherent* to men or women, but rather what society deems *desirable* in men or women. Additionally, the

scores are independent of each other, which means that the scores do not “artificially force a negative correlation between masculinity and femininity” (p. 159). This signified a change in how sex difference was measured in relation to societal expectation rather than through overarching, universal traits that indicated that femininity was somehow a failure of masculinity. Additionally, the BSRI allows for an option of being a mix of feminine and masculine rather than having to be one or the other. The BSRI went on to be wildly popular, cited significantly more than other inventories in sex research (Beere, 1990, p. 74).

Some advances in women’s rights, however, resulted in the entrenchment of stereotyped ways of thinking. Though women were not included in combat or the draft, in the 70s the military had opened to women, starting with the all-volunteer service, starting in 1973 when the draft ended, and the admittance of women to the military academies starting in 1976. In 1971, several men filed a complaint charging unlawful gender-based discrimination because they had been drafted to fight in Vietnam. The exclusion of women from the draft was based on their exclusion from combat, which was a Department of Defense policy and had the force of law. Military officials justified their policy with “military need, rather than ‘equity,’” arguing that women, even in noncombat roles, would be “positively detrimental to the important goal of military flexibility.” Though it was not resolved until the 80s, the decision was justified by the male military’s authority (an echo chamber similar to the all-male bar in 1869) and popular opinion, which also echoes the “law of nature” invoked so often in the nineteenth century.

Along with the Civil Rights Act of 1964, several anti-discrimination laws were passed in the early 1970s specific to medical education—Title VII of Public Law 92-147, the

Health Manpower Act and Title IX of the Higher Education Act—that resulted in a dramatic increase of women into medical school. In other legislation, the 1978 Pregnancy Discrimination Act added wording to the Civil Rights Act of 1964 stating that “on the basis of sex” also referred to pregnancy and pregnancy-related conditions. Between 1971 and 1977, the amount of women graduating from medical school increased from six percent to about 30 percent (Bluestone, 1979, p. 760). Following the passage of these laws and the subsequent influx of women into the field, women physicians were studied intently, with many of the topics related to the hostile environment in medical schools (echoing the situation at Bellevue in the 1860s), the high suicide rate of women physicians, the work-life balance, and discrimination encountered by male doctors. Most of this discourse acknowledges that the difficulty of women in the profession relates to social circumstances (e.g. discrimination; family pressures) rather than women’s ability to perform.

Intersex people. The term “intersex” came into common usage during this timeframe. As Money continued to develop his neutrality-at-birth hypothesis, he abandoned intersex research to focus on the John/Joan case. Additionally, few accounts of intersex psychotherapy exists beyond Stoller’s work because of the requirement, set in place by Money, that the gender assignment and corrective surgery kept hidden from the patient (Rosario, 2007). Furthermore, Young, et al. (1971) recommend that a team diagnose and present a physician-assigned sex “if this can be done before the parents are aware of the problem and they are presented with a united decision, whatever it is, there will be greater acceptance” (p. 86). Echoing Money, Young, et al. write, “The child’s confidence in his gender identity will stem from his parents” (p. 86). Consequently, intersex people,

particularly infants and children, were non-consensually subjected to developments in sex reassignment surgery that transsexuals fought for the right to undergo. Thus, intersex people were not usually aware or apprised of what they had undergone.

The convenience of the team was still paramount. Young, et al. (1971) recommend that specific types of intersex children be raised as girls, as “they are less subject to the close scrutiny of their genitalia...both in early childhood and later in locker rooms and public rest rooms” (p. 87). Money (1976) argues that “Surgery is, without exception, imperative. The success of masculinizing corrective surgery is proportional to the size of the organ to begin with” (p. 153). The imperative to ensure a “normal” penis size seems to be an anxiety shared by those that had a penis. Rosenblum & Turner (1973) report a case note of a man living in rural South Carolina who lacked a penis because of a rare congenital condition. He reported a “‘satisfactory’ marital relationship with his wife, finding sexual gratification through means other than penetration (p. 178). Rosenblum and Turner conclude that he displayed “no additional anomalies and by psychological testing was noted to adjusted to his situation in a reasonable fashion” (p. 179). The patient’s rural upbringing likely contributed to his confidence and saved him from a life of confusion. Had he been presented at birth in a hospital without a penis, according to Money’s imperative, he would have had his testicles removed and been raised as a girl.

Trans people. Discourse on trans people remained the province of psychoanalysis, endocrinology and the hybrid field of sexology. Harry Benjamin and Robert Stoller began their run of significant work on transsexuality in the late 60s. Though these works were written prior to the timeframe of 1971-1979, their influence extended well into that decade. Benjamin published his book *The Transsexual Phenomenon* in 1966 and

referring to “The symphony of sexes,” he articulated the changing understanding of sex: “The more sex is studied in its nature and implications, the more it loses an exact scientific meaning. The anatomical structures, so sacred to many, come nearer and nearer to being dethroned. Only the social and legal significances of sex emerge and remain” (p. 6). Stoller’s book *Sex and Gender* appeared in 1968, in which he announced his conceptual division of sex and gender:

The word sex in this work will refer to the male and female sex and the component biological parts that determine whether one is male or female...this obviously leaves tremendous areas of behavior, feelings, thoughts, and fantasies that are related to the sexes and yet do not have primarily biological connotations. It is for some of these psychological phenomena that the term gender will be used. (p. vi)

Money’s voice, as elsewhere, was present here, too. He credited chromosomes, but also traumatic experiences as causes of transvestism and transsexualism (1967). Benjamin, skeptical both of Money’s claims of the learnability of gender and psychotherapy, wrote, “a prenatal, neuro-endocrine disorder” likely underlies transsexual behavior, which explains “why psychotherapy cannot cure the transsexual, why the emotional distress goes to such depths as to demand surgery, and why endocrine therapy often brings such dramatic relief” (p. 136). Yet, even Benjamin’s sympathetic approach relies on deep-seated ideas of feminine and masculine behavior. In a conference panel, he places the “hippy movement, with its long-haired boys and trousered girls” as one end of the transsexual spectrum (Benjamin, 1969, p. 135). This tension between the psychological and biological continues throughout the literature of the period.

Despite increasing sympathy for those seeking transition, researchers often still looked for “cures” or rehabilitation for transsexualism through various methods. Typically, psychotherapists opposed surgery because they felt transsexuality was a disorder or condition that could be cured through psychotherapeutic techniques (Green, 2010, p. 1459). As a psychotherapist, Stoller (1968), too, opposed surgery, but he was one of the few that admitted that patients often were “less depressed and anxious, more sociable and affectionate” once they had reassignment surgery (p. 249). He only recommended sex changes for what he called “true transsexuals,” which were males who had been feminine since childhood, lived as women and did not use their penises for sexual pleasure (p. 251); however, his surgeon colleague acknowledged that patients quickly learned his requirements and began to present “the winning socio-sexual history” that would get his permission (Green, 2010, p. 1460). Rekers, et al. (1976) announce what they believe to be the first case of preventing transsexualism through parental reinforcement of gendered behaviors. Benjamin, in an addendum to *The Transsexual Phenomenon* (1969), though still advocating psychotherapy only as a means of helping trans people accept themselves as they are, tentatively recommends a drug used in epileptics as a “cure,” reported that it helped transvestites but that transsexuals remained unchanged (p. 137). He saw surgery or hormone therapy as the only “real” cure to transsexuality. Green, Newman, & Stoller (1972) recognize, as many did at the time, that a “cure” was less an effort to fix a disorder than to protect them from the persecution. They write, “While privately, one might prefer to modify society’s attitudes toward cross-gender behavior, in the consultation room with an unhappy youngster, one feels far more

optimistic about modifying the behavior of that one child than the entire of society” (p. 217).

The legal climate was a concern for researchers and clinicians, who combatted hysterical media reports of sex reassignments gone wrong. Benjamin (1969) describes how the *New York Times* overblew a case where two reassigned women developed breast cancer, defending his and other research and calling the cases mischaracterized and misleading. In the same article, he describes the fear and agony of the physician that the patient will either regret the decision or be denied beneficial surgery, resulting in unhappiness to the point of depression and suicide. To combat the chance of making a poor decision and slow down the patients who lied about their histories, Benjamin advises a year of therapy prior to any surgical intervention, which Money coined as the “Real Life Test,” and it eventually became standard practice. He recommends this not only for the patient’s health but for the physician’s protection as well. Since sex reassignment surgeries were considered cosmetic rather than medically necessary, they were not covered by insurance and the cost was prohibitive to most trans people, but as Benjamin (1969) notes, “Too often, transsexuals make their own decisions, find their surgeon and, under the driving and blinding force of their sex and gender confusion, act without anyone's consent or recommendation” (p. 137). Money & DePriest (1976) also recognizing the urgency of trans people to change sex, reported on several cases of trans people self-castrating but write that “the present climate” prevents cooperation between psychiatrists and surgeons to find out if rehabilitation of the transsexual anxiety had been relieved because of the removal of the organs (p. 294), indicating a fear of conspiracy.

In 1979, after a research study claimed that surgically-altered transsexuals were not better off after the surgeries, Johns Hopkins discontinued sex reassignment surgeries. It was widely considered to be an excuse to shut down the clinic by a new, more conservative administration (Brody, 1979; Witkin 2014). In her 1994 edition of the *Transsexual Empire*, Raymond credits Money's position that pornography and incest were not necessarily damaging to children as part of the reason the Gender Identity Clinic at Johns Hopkins closed (p. xi). Despite this, around 25 hospitals around continued to conduct sex-reassignment procedures. Richard Green, a surgeon and colleague of Robert Stoller, describes his experience assessing his legal risk for conducting a sex reassignment surgery around 1968:

[The university attorney] conceded that I would be vulnerable to prosecution for mayhem. The penalty if convicted was up to 10 years in prison. Furthermore, since this proposed act involved two of us, a psychiatrist and a surgeon, it constituted conspiracy. The penalty was now up to 14 years. But, the university counsel reassured me, the University would pay our legal bill. [The patient] had her surgery. We were not prosecuted. (Green, 2010, pp. 1459-1460)

The advances in surgical medicine resulting in a surge of sex reassignments in the 1950s resulted in legal aftereffects for trans people in the 70s, as those who had sought sex reassignment encountered the legal barriers for which no precedent existed. A sympathetic article in the *Maryland Law Review* stated:

A sex reassignment operation may solve the transsexual's medical problem, but it is potentially the source of legal problems, because the law has not faced the question of defining an individual's sex. The paucity of legal precedents for

transsexuals leaves a void that is likely to be filled with inappropriate medical or moral judgments until laws are changed or interpreted so as to recognize this human phenomenon. (“Transsexuals in Limbo,” 1971, p. 236)

Therefore, only tangentially-related laws were consulted as precedent. Matto (1972) notes a case of where a transsexual’s arrest invoked a century-old law intended to prevent farmers from dressing as Indians to protest rent laws (p. 104).

Generally, in legal literature, transsexuals were treated more sympathetically than gays, who were still prosecuted under “perversion” and “unnatural acts” statutes. The Maryland law review article argues that transsexuals are subjected “to arrest whenever he appears in public wearing the clothes of his choice, but also forces him to face potential harassment and ridicule.... Although his behavior not in any way disruptive or destructive, the transsexual is subjected to legal and emotional punishment because his psychological development does not match his chromosomal makeup” (“Transsexuals in Limbo,” 1971, p. 253). The article argues the importance for a transsexual to be classified in the desired sex to avoid being cast as a homosexual. Though no legal reason existed to arrest trans people, they were often associated with homosexuality, treated as vagrants, or practiced prostitution, all of which were illegal (though *Black’s* restricts prostitution to women only) (*Black’s*, 1968, p. 1386). A psychological study on transsexuals passing notes that transsexual prostitutes were considered “double deviants” by the police, who constantly harassed them, including regular strip searches (Wojdowski & Tabor, 1976, p. 201). An article in *Criminology* writes that transsexuals’ greatest crime is “the possession of an undesirable unique characteristic that is sanctioned by society in general,” but that tolerance would grow because it “does not represent any real threat” (Matto, 1972, p. 98).

In medical jurisprudence, Holloway (1968) notes that he could not find any legal definition of sex, and writes that “the judiciary has relied exclusively on medical determinations of sex” (p. 289 note 42). “Transvestite,” “Transsexual,” and “Cross-dress” did not appear in Black’s 1968 edition, but “Hermaphrodite” hedged a bit more than in previous editions. “In medical jurisprudence. A person of doubtful or double sex; one possessing, *really or apparently*, and in *more or less developed form, some or all* of the genital organs of both sexes” (p. 860, emphasis mine). A following definition of “Hermaphroditus tam masculo quam feminie comparatur, secundum prievealentiam sexus incalescentis” translates as “An hermaphrodite is to be considered male or female according to the predominance of the exciting sex” (p. 860). The originating references, to Henry de Bracton, and Coke’s *Commentary* on Littleton, are from thirteenth century and sixteenth century English law respectively, and are the same references used for the term “monster” (p. 1158). Clearly, the legal dictionaries did not rely on current medical determinations. Holloway (1968) referenced both John Money and the Bible as authority regarding trans people. In particular, Deuteronomy 22:5 (“A woman shall not wear that which pertaineth unto a man, neither shall a man put on a woman’s garment; for all that do are an abomination unto the Lord thy God) and Genesis 1:27 (“male and female he created them” are most often referenced (Holloway 1968; Brown 1960). However, often they are considered a factor to consider, not a final authority.

As the number of sex-reassignments grew, sex designation on identification documents became an area of increasing legal cloudiness. Since birth sex is determined by a glance at the genitals, a birth certificate is legally considered *prima facie* evidence, which means only tenuously legally binding, rebuttable by other proof (“Transsexuals in

Limbo” 1971, p. 243). As of 1968, Illinois was the only state with a provision for amending birth certificates, and specifically referred to sex reassignment surgery (Vital Records Act, 1967). Some others provided for “correcting” errors (which generally meant a clerk would cross out the original designation and write the new one above it) and others for “altering,” which meant a new certificate was issued (Holloway, 1968, p. 288-289). One New York case in 1966 allowed a “corrected” birth certificate to be reissued (*Anonymous v. Weiner*, 1966). The argument was that fraud could be committed if birth certificates could be changed, thus concealing one’s “true” identity. The legal test of fraud requires “intent to deprive another of his right, or some manner to do him an injury” and that damage needed to be shown (*Black’s*, 1968, p. 789). In 1965, the New York Board of Health asked for recommendations from the Committee on Public Health of the New York Academy of Medicine to help decide whether to grant requests to change sex on birth certificates. The response recommended to deny such requests:

1. Male-to-female transsexuals are still chromosomally males while ostensibly females.
2. It is questionable whether laws and records such as birth certificates should be changed and thereby used as a means to help psychologically ill persons in their social adaptation. The Committee is therefore opposed to a change of sex on birth certificates in transsexualism. (cited in Swartz, 1997)

But by the early 1970s several states’ statutes allowed individuals to change the sex designation on their birth certificates (i.e. Arizona Revised Statute, 1969; Louisiana’s Revised Statute, 1971). Despite the potential legal complications, Wojdowski & Tabor (1976) found that most trans forged ahead with medical treatments and “ignored possible

legal problems, planning to tackle a legal change of sex designation after surgery had been completed” (p. 202).

Along with birth certificate amendment, the validity of marriage became one of the most common legal disputes of the 1970s (and still is). Though marriage was defined in *Black's* as between a man and a woman, some states did not specifically outline this in their own codes. In some cases, the issue at hand was divorce, where one party wanted the marriage to never have existed and used the conditions of marriage as between a man and a woman as leverage when one partner was trans or intersex. In others, property or inheritance disputes arose from either a disgruntled spouse or the family. In all cases, the question revolved around whether the marriage was valid or not because of the impossibility of same-sex marriage. Thus, the courts needed to explicitly determine the sex of both spouses. In 1970, an influential English case, *Corbett v. Corbett*, established a standard that gonads, chromosome patterns and genitals determined “true sex,” and consequently post-operative transsexuals would legally still be considered their birth sex, despite their presentation or desired sex. Additionally, the consideration that the marriage could not and was not consummated (because of an “artificial vagina”) led the court to decide the marriage was invalid. This determination was meant for the purposes of determining whether a marriage was legitimate (hetero) or invalid (same-sex), and the consummation aspect pointed toward heteronormativity and “normal” sexual practices. Though it was a British law, in the lack of U.S. precedent, it was cited in U.S. cases.

Several subsequent cases invalidated marriages where one spouse changed sexes following the marriage ceremonies based on the illegality of same-sex marriage, even though the pair was heterosexual (*Anonymous v. Anonymous*, 1971). In *B v. B* (1974), the

ruling followed Corbett by invalidating the marriage between a woman and a trans man.

M.T. v. J.T. (1976), New Jersey was the first court to evaluate sex during marriage, not at birth, reasoning that the marriage had been consummated. The decision stated:

It is the opinion of the court that if the psychological choice of a person is medically sound, not a mere whim, and irreversible sex reassignment surgery has been performed, society has no right to prohibit the transsexual from leading a normal life. Are we to look upon this person as an exhibit in a circus side show? What harm has said person done to society? The entire area of transsexualism is repugnant to the nature of many persons within our society. However, this should not govern the legal acceptance of a fact.

During the 1970s, women's rights were largely legally recognized, but the decade was spent attempting to litigate social change, fighting depictions of their gender based on social norms and a presumed biological imperative. Similarly, the publicity and research attention paid to trans people in the 1950s and 60s also found its way to the courts in the 1970s as trans people fought to have their rights recognized in their new sexes. During this time, the focus seemed to be on finding the causes for and "fixing" transsexuality through two extreme methods: rehabilitation or sex reassignment. Intersex people continued to be an area of interest, and were treated even more as objects as experimental gender-assigning therapy and "corrective" surgeries based on parent and medical and psychological expertise. The next chapter examines the genealogy of the three concepts of women, trans and intersex people as represented in the *DDC* during the same three timeframes.

Chapter 5: Findings, Internal Procedures

Prior to Melvil Dewey's innovation with the decimal classification, libraries had typically used "fixed location" schemes that classified books in broad categories that ordered the books according to the day they were added to the collection. This was a holdover from closed stacks, where librarians retrieved books for users rather than allowing them to browse the stacks. In the late nineteenth century, libraries came to be seen as instruments of self and societal improvement and with that came open access to stacks and a host of organization problems (Satija, 2013, p. 2). Dewey, from the start, recognized the imperfection of the *DDC* and expected and expressed that it would continually change. Furthermore, in terms of subjectivity, though it came to be a women-intensive profession, the first woman librarian was not hired in the United States until 1871 (Maack, 1994, p. 229). This chapter identifies the changing views of gender and sex in the gender- and sex-related classes in the *DDC* through the appropriate timeframes.

Dewey Decimal Classification 1871-1876; 1876-1885

While devising the first edition, Dewey visited several major libraries including the Boston Atheneum (whose director was Charles Cutter), the Boston Public Library and the Harvard University Library and read the works of the directors of the Cincinnati Public Library and the St. Louis Public Library, who were influenced by the schemes of Francis Bacon and Hegel (Wiegand, 1996, p. 19-23). Dewey discussed his vigor for creating a better classification system in spiritual terms, as the library's mission is to supplement the basic education provided in school, offering a method of self-directed, self-improvement idealized in that time period, particularly in New York (Wiegand, 1996, p. 18-19). In his first edition, Dewey emphasizes that the scheme makes it easy to identify

the “character of each person’s reading” (p. 8) perhaps identifying him as the originator of big data. Dewey graduated from Amherst College with sixty-five other white, Protestant, Anglo-Saxon males the year following publication of the scheme (Wiegand, 1996, p. 24).

Dewey’s relationship with women was complicated. He fought to include women in library education and promoted them to librarianship. He instrumentally, if not single-handedly, is responsible for librarianship as a female-intensive profession. He reflected some of the biases of time, yet he was aware of their subjective nature. For example, in 1886 he wrote an essay explaining why women are “handicapped” as librarians, but his reasoning was because they did not have the business training that men had, suggesting that with an equal education, women would be just as successful as men:

Women have usually poorer health and as a result lose more time from illness and are more crippled by physical weakness when on duty. The difficulty is most common to women, as are bright ribbons and thin shoes and long hair, but it is a question of health, not sex. A strong, healthy woman is worth more than a feeble man for the same reason that a strong man gets more than a weak woman. (Dewey, 1886, p. 20)

He goes on to describe some of the social disadvantages women have suffered, yet concludes, “With equal health, business training and permanence of plans, women will still usually have to accept something less than men because of the consideration which she exacts and deserves on account of her sex,” with the justification that men can, in an emergency, lift a large box or “climb a ladder to the roof” (p. 20).

What follows is a discursive analysis of what Foucault calls “internal procedures.” As discussed in the methodology section, internal procedures refers only to each of the selected editions of the classification *DDC* and its associated discourse, addressing each epistemological aspect laid out in the methodology section (authority, rhetorical space, ontology, etc.). These clues will be related to the gender topics (or lack of) found in the classification. This section documents the overarching epistemic attitude expressed in the discourse and traces the trajectory of the ontogeny of the gender-related topics within each rendition of the classification. The more specific epistemic connection with the medical and legal discourse will be discussed in the final chapter.

First Edition, 1876

The first edition of the *DDC* appeared in 1876 at the first meeting of the American Library Association. The entire volume covers just 42 pages, including the classification schedules and the relative index, the directory that points users to the preferred heading. In the first edition, no general class heading exists specifically named “women” or “men” or unsurprisingly for the concept of trans, but a few feminine-related headings and “hermaphrodites” do appear in the scheme and relative index, which will be explained below. Because of the temporal proximity, the timeframes surrounding the first and second editions are combined when discussing the medical and legal discourse; however, the first two editions of the *DDC* differ significantly, so they will be discussed separately.

Authority. The epistemic clue of authority, where the degree of subjectivity allowed to the known object is determined, indicates who is making decisions about the ontological characteristics of sex and gender. Do women define their own characteristics, or do intersex people have a say in choosing their desired sexes (if they even identify

with one or the other) or does someone else tell them what their “true sex” is? Do trans people get classified in their birth sex or their desired gender? How are these questions treated in the discourse or manifested in the classification? Who or what is the enunciative modality?

Dewey did not claim authorship of the first edition, publishing it anonymously, and he did not sign the ten-page preface. The only place his name appears is on the copyright statement. The preface mainly consists of instructions interspersed with sales pitches, emphasizing the amount of external works he consulted. He remarks, “It was the result of several months’ study...of hundreds of book and pamphlets, and in over fifty personal visits to various American libraries” (p. 3). He professed that “The author has no desire to claim original invention for any part of his system,” claiming influence from a Milanese library, and that “the inverted Baconian arrangement of the St. Louis Library has been followed” (1876, p. 10). Throughout the preface, Dewey removes himself from the power politics of knowledge mapping by repeatedly referencing his influences. He positions himself as a humble, hard-working, and anonymous librarian concerned first and foremost with how the utility of his scheme could benefit librarians and users alike.

Rhetorical Space. Whether purposefully or not, Dewey did not include women in the classification, other than through the classes of “woman-education” and “woman-suffrage.” Education and voting rights could not be avoided, as those were the characteristics that thrust women into the public eye at the time. The only class with an explicitly gendered heading is **376 Education—Female**. Under Olson and Schlegl’s (2001) rubric, this heading treats the education of women as exceptional. By adding the qualifier of female to education, the assumption is made that the education of females is

anomalous from the males-only norm, which was represented by **Education** (p. 67). No equivalent masculine qualifier exists, which implies that education alone means that the education of males is natural and normal.

The only other explicitly feminine topic, **618 Obstetrics and Sexual science** again expresses a devaluation based on where it is rhetorically situated. Dewey (1876) explains that for convenience of the user, “the most nearly allied subjects precede and follow” each other, meaning that that proximity implies a close relationship (p. 7). Following this principle, women’s reproductive science is considered by Dewey to be allied closely with **619 Veterinary medicine**. No other category includes feminine topics, and women are not explicitly mentioned in **640 Domestic Economy**. Comaromi (1976), a later editor of the *DDC*, in his largely complimentary history of the system, has no comment that the category of “women” was omitted altogether from the first edition, but does complain that **Domestic Economy**, an implicitly feminine category, should not be elevated “to the same level as medicine or engineering or any of the other skills with a heading in the Useful Arts” (p. 73). “Hermaphrodites,” with a scientific aura, appears in the relative index, directing catalogers to **590 Zoology** for animals or **612 Physiology** for humans.

The relative index is another of Dewey’s innovations, a tool included with the *DDC* that helps catalogers class topics that do not command classes names themselves or are alternative names for the same concept. Dewey (1876) explains, “Many subjects, apparently omitted, will be found in the Index, assigned, with allied subjects, to a heading which bears the name of the most important only” (p. 6). In other words, users are directed to the “correct” or preferred heading as determined by him. In the first edition’s

subject index, some feminine-identified concepts can be found, but they all in some way relate to education, reproduction, religion or exceptional circumstances—parallels of the headings that exist in the classification.

Fallibility/Universality. The original stated purpose of the *DDC* in this edition is efficient access to information; however, without claiming to be accurate: “Theoretical harmony and exactness has been repeatedly sacrificed to the practical requirements of the library” (1876, p. 4). Dewey did not claim to map all knowledge as many other classifiers did (Frohmann, 1994b, p. 113). Dewey argues, “Philosophical theory and accuracy have been made to yield to practical usefulness” (p. 4). He admits, “the impossibility of making a satisfactory classification of all knowledge as preserved in books, has been appreciated from the first, and nothing of the kind attempted (p. 4). He also requested feedback from “quite a number of librarians,” but concedes that most of their feedback was positive and only minor shelving problems resulted from the implementation of his system. Once Dewey received more feedback over the next ten years, it evidently indicated that space was needed for women’s topics.

Ontology. Dewey used the Amherst College Library to warrant his decisions on the classification. Without knowing exactly the contents of that specific collection, a search in WorldCat for “women” in the mid-to-late nineteenth century timeframe indicates that a great deal of literature on women existed. As expected, much fits into the suffrage, education, home, and gynecology-obstetrics classes. However, many works took a broader approach to the “new woman” or women’s worth and status (e.g. Farnam’s 1864 *Women and her era*, or McIntosh’s 1850 *Woman in America: Her work and her reward*) but because they touched (or it was assumed they did) upon suffrage or

legal rights, they perhaps would be shoehorned into the suffrage or education classes. Additionally, for works such as Elizabeth Blackwell's 1860 work on medicine as a profession for women, no place existed for works on professions, either. Also plausible is that Dewey's library did not carry such titles; however, considering the number of libraries he consulted, it seems unlikely none of them would be without them. A search in WorldCat between 1850 and 1871 for "Hermaphrodites," which is mentioned in the relative index, brings up 19 titles in English that refer to human hermaphrodites, including a doctoral dissertation of 1875 on the medico-legal aspects of hermaphroditism. Many titles include such words as "curious" or "remarkable" or "monstrosity," which at this point do not influence *DDC*'s language, but do so in future editions.

Necessary and sufficient conditions. Though nowhere in the *DDC* does it state outright the characteristics that make a woman a woman, but a look at the gender-related topics in the classification and the relative index explicate what roles a woman is expected to play in the world at the time according to warrant or the classificationist's worldview. The terms Dewey thought might be sought on women in the relative index include woman—education, woman—suffrage, which merely echo the two class headings. The index suggests that female seminaries and nunneries should be classed under schools and colleges, implying both seclusion and the idea that no other type of institution should educate women. The remaining terms include housewifery (but no housekeeping), midwifery, pregnancy, maternity, and finally, mothers, which should be classed under family. The term "fathers" was not included in the index and does not exist as a class or division heading. The absence of the term "fathers" emphasizes how the realm of the private—the home and family—was the responsibility of women. The only

two concepts in the classification and index that do not relate to the domestic sphere represent institutions that exclude women: suffrage and education. Thus, the age-old division of public and private becomes evident as *DDC*'s first edition only represents women as restricted to the private and reproductive and excluded from public life.

Second Edition, 1885

In 1885, with Dewey still as editor, the classification was greatly expanded from 42 to 315 pages, with input from “hundreds of specialists” (Dewey, 1885, p. 7). Tables made their debut, and women finally got their own classes, the infamous 396 class and an expansion of **376 Education of Women**, shown and discussed below. Presumably, as some examples above showed, in practice a class was needed, but little effort seemed to be put into determining an appropriate location. Women are added into a rather random class under **Customs, Costumes, Popular Life**. Though the medical discourse focused on sexuality, the *DDC* and the legal discourse tended toward political and social subjects.

Authority. Whatever underconfidence and humility Dewey exhibited in the first edition was gone by the second edition. Unlike his anonymous publication of the previous edition, this time his name was splashed on the cover, in large capital letters, with his many credentials, including “Professor of Library Economy and Chief Librarian of Columbia College; Consulting Librarian of Wellesley College; Secretary American Library Association; late of Amherst College Librarian, and Editor Library Journal,” with an “etc., etc.” to indicate much more. The publisher’s note took on a boastful tone, exhorting that “ten years’ experience has more than confirmed the great hopes of its usefulness” thanks to “many unsolicited and enthusiastic testimonials” (p. 7). And, for the first time, he refers to it as the “Dewey System” (p. 48). If the first edition was divinely inspired, the second showed a fulfilled purpose of making the world a more

organized place, everywhere from the notes of “some school-boy” to the “President of some Royal Scientific Society” (p. 7). The system “has been used by the ignorant and the learned, by the most painstaking and accurate scholars, by hurried men of business,” thus establishing his vision for universal usership. The labor that went into the second edition is a “gift to the public” and “not as a source of income to either author or publishers” (p. 7). Perhaps as a concession to all the feedback he received on the first edition, he writes, “no individual is sufficiently learned to wisely classify books on all subjects and sciences...by the aid of specialists, the index can in time be made reasonably accurate” (p. 34). Though he “is always grateful for suggestions,” in a rather thin-skinned and defensive aside, he advises, “The only safe rule is to make no changes or subdivisions without submitting them to the author, who will gladly advise on such matters without charge, not on the ground of any superior wisdom, nor even because of larger experience in this special work” but rather to prevent the user from having to defend all the “blunders” that will inevitably occur (p. 50). The passage hints at Dewey’s desire for control and expresses his belief that unauthorized changes to the system will reflect poorly on him.

Rhetorical Space. Women finally got a category of their own: 396, or in Olson and Schlegl’s (2001) parlance, they were “ghettoized,” or “gather[ed] and isolate[ed] rather than integrat[ed]” (p. 67). The 390s, **Customs Costumes Folklore**, consisted of the following divisions:

391 Costume and Care of person

392 Birth, Home and Sex Customs

393 Treatment of the Dead

394 Public and Social Customs

Including fairs; chivalry, tournaments; dueling, suicide

395 Etiquet**396 Women's position and treatment****397 Gipsies Nomads Outcast races****398 Folklore Proverbs****399 Customs of war**

Weapons, war dances, treatment of captives, scalping, mutilation, burning, cannibalism, etc.

Comaromi (1976) comments, "This most interesting of catchall divisions was much more useful now" and dismisses the idea of a logical ordering as perhaps "not possible" (p. 140). In a passage repeated from the original 1876 introduction, Dewey (1885) writes,

As in every scheme, many minor subjects have been put under general heads to which they do not strictly belong...The rule has been to assign these subjects to the most nearly allied heads, or where it was thought they would be most useful. The only alternative was to omit them altogether. (p. 25)

The threat of omission stifles the possibility of complaints, despite the absurdity of the arrangement. Keeping in mind the principle of hierarchical force, the arrangement necessitates that **women's position and treatment** shares some characteristic with **customs, costumes and folklore**. Could women's treatment be a custom? Women are allied with **etiquette, outcast races, suicide**, and **treatment of the de[a]d**. A tenuous allegiance can be found between **Women and Birth, Home and Sex customs** (unrelated to sexual ethics), which includes include marriage, sexual relations, and concubinage.

However, the jarring turns in the category obscures the usefulness of this arrangement to someone browsing the shelves.

The subdivisions of 396 seem much more serious than the broad 390 class.

Looking more closely at the subcontents of 396, we find:

.1 Emancipation

.2 Legal status, property, rights, etc.

.3 Political status

.4 Education

.5 Employment

.6 Woman in home

.7 Delineation of woman in art

.8 Delineation of woman in literature

.9 Woman in history, politics, war -Amazons

Most of these classes fill needs that were lacking in the previous edition, as discussed above. In this group, the **.9 Woman in history, politics, war-Amazons** division deserves comment. A criticism of the structure of *DDC* leveled by Dewey himself is its “procrustean” nature (p. 31); that is, the idea even Dewey in the first edition calls “absurd” that all knowledge fits neatly into hierarchical categories of ten (1876, p. 4). A resulting quirk of that procrusteanism is the “Other” category, or the 9 slots, which Dewey promoted as a benefit of the system. To fit the structure, singular subjects are either stretched thin or many subjects are condensed into the 9 slot. The 9 slot of any particular category famously tends to house what the editors have deemed the leftovers of the category or marginalized topics shoved into one slot. Odd class-fellows result from

attempts to bolster sparse categories resulting in either a miscellany of orphan topics or an unreasonably large topic with only one number to accommodate it. The 9's often starkly lay bare biases, as they rank the relative importance of concepts in the eyes of the classification. The .9 women here are excluded from the general categories of history, politics or war, which would lead a user hunting for them to believe women had no role in any of them. Those who accidentally discover them in 396.9 (since no "class here" note exists in the general categories) might conclude women played such a small role in those areas that they compress all three into the space of one heading, although it could be warrant-driven. The curious appendage of the term "Amazons" leads to either the assumption that the standards for inclusion in the category at minimum mean the founding of a female warrior nation or that the Amazons are the only women who have had a role in history, politics or war. Elsewhere, in perhaps an unintentional acknowledgement of oppression, **324.3 woman suffrage** is allied with **slavery**. **Labor of Women**, in 331.4, is allied with **labor of convicts and children**, indicating that women working could be considered something either outrageous or punishing.

Ontology. Given the historical events and literature of the time, the chosen topics of the subdivisions likely are warrant-inspired, which means that the feedback received after the system had been in use for a while reflected a need for classificatory space for these topics. The many catalogers providing feedback may have found that women represented such an anomaly that they did not "fit" into the general categories. Other new developments perhaps related to warrant includes the expansion of **176 Sexual ethics**, which newly included topics seemingly ranked from good to evil: **chastity**, **celibacy**, **continence** [abstaining even from marital sex], **solitary vice** [masturbation], **social evil**

[sexual crimes like rape, pedophilia, sexual abuse], **adultery** [which also can be classed in Criminal Law], **immoral art**, and **immoral literature**. This likely reflects again the didactic literature of the societal improvement reform movements of the time, including that of the library. As Dewey (1885) notes, “so much wise attention has been given to educating the tastes of readers in our public libraries” (p. 57). A WorldCat search retrieves around 35,000 titles on women published between 1850 and 1885, so warrant obviously contributed to the addition of the class for women, regardless of its odd placement. “Hermaphrodites” only adds a handful more titles between 1876 and 1885. **Necessary and sufficient conditions**. The expanded 396 class acknowledged a wider range of roles for women and thus more recognition of women’s value and desire to be emancipated. Additionally, a larger **376 education of women** included a variety of education topics, such as **convent education**, **“fashionable” education**, and the **physical and mental capacities of women**. **Women as teachers** in 371.18 likely resulted from the literature of the Common School reform movement, led by Horace Mann in the 1840s, that established teaching as a female-intensive profession based on the belief that women would make better teachers because of their innate maternal nature and moral fortitude.

A new class, **Mental characteristics as influenced by sex** 136.1 (under **Philosophy/Mind and body**) allies with **physiognomy** and **phrenology**, showing the nascent psychological connection between sex and mind. Sex differentiation begins to take on a psychological note, but in a manner that essentializes by attaching gendered behavior to sex. The allied topics, which also included witchcraft, though taken seriously at the time, were not considered medical or scientific. These subheadings were likely created in response to need, reflecting the biases of the literature being cataloged, yet in

structural warrant, either a parallel or more inclusive general category could have worked. A few additions to the scheme acknowledge men's roles in family: the essentializing 173.3 **Duties of husbands and wives** and 173.5 **duties of parents**. Origin of the sexes is the .9 category in **575 Evolution**.

“Hermaphrodites (man),” still only found in the relative index, lost its rather general place in **Physiology**; users now were directed to a subheading of **Natural History of Man: 573.7 Craniology** (another concept relating to phrenology), allied with **Dwarves and Giants** and **Monstrosities**. The connection between the pseudo-science of craniology and intersex is unclear, other than that phrenologists believed that personality was highly influenced by size and development of cranial features and passed down through the mother. Potentially the connection was that craniology could help explain variation in sex organs. Undoubtedly, the alliance with **Dwarves and Giants** and **Monstrosities** suggests abnormality, grouping them as freaks of nature.

Fallibility/universality. In the section “Changes from first edition of 1876,” Dewey, conscious of the effort required to reshell, again emphasizes ease of use. Rather than expressing specifically why changes were made, he merely refers to “better” arrangements or that “a comparison of the old and new headings will make plain to any one familiar with the subject why it was best to change” (p. 45). In many spots in the second edition, Dewey makes note that feedback from the field contributed to the second edition; however, his urge to include cataloger feedback fought with his urge to maintain strict copyright. Several pages are dedicated to explaining that users of the system can and should make their own adjustments, but that they must adhere to copyright (e.g. pp. 7-8).

Summary of the First and Second Editions

The early *DDC*'s internal discourse reflected that women were only present in maternal and reproductive capacities. Other classes related to women were associated with institutions that excluded women. The second edition slightly improved in inclusiveness, reflecting women's desires to enter into those institutions. However, it continued to minimize women's roles outside the home. Trans people were not present in either of the first two editions, and intersex people were first cast not unfavorably as just another type of anatomic presentation, but then later allied with monstrosities. Regardless of how seemingly insulting or puzzling the class for women was in the *DDC*, it would be eighty years and the rise of the women's movement before any change would occur.

Seventeenth Edition, 1965

The seventeenth edition of the *DDC* arrived shrouded in controversy. Melvil Dewey had died in 1931, though his son Godfrey remained associated with the *DDC*. Since 1937, a committee rather than a single editor oversaw the classification—the title page did not even list an editor. This was the first edition published since the *DDC*'s Editorial Office had merged into the Library of Congress' subject cataloging office, and a power struggle ensued between the two. The edition also arrived after the tumult of the controversially stripped-down 15th edition and the consequent restored 16th edition. An overriding theme of “innovation to keep up with knowledge” that permeates the introductory matter required a break with some of Dewey's original principles. In the introduction, Custer justified the decisions by asserting that modernity itself was at stake because the many class relocations would allow libraries to keep up with all the new knowledge being created, but, he acknowledged, would require a great deal of reshelving,

an outcome that Dewey would have vigorously avoided. Some discord seems evident within the editorial staff on this point. The preface, written by Wyllis Wright, chair of the editorial committee, notes, “A classification that does not keep reasonably abreast of current thinking must in time die, but one that imposes on its users the tremendous costs of reclassification too recklessly will die also” (1965, p. 3). Custer also rebelled from some of Dewey’s other positions by dropping the remaining simplified spelling, and argued for the integrity of a subject over the “preference for practicality over theory” (p. 43). He mentions in his instruction that Dewey’s system became popular because of its convenience, not because of “any theoretical excellence of his arrangement” (p. 13). Though some aspects of Dewey’s legacy were rejected, he was repeatedly invoked for his intention of creating a theoretically imperfect but convenient system.

Editor Benjamin Custer predicted that the seventeenth edition would contain such significant changes that librarians would potentially reject it, and he was right (Comaromi, 1976, p. 540). The reaction from the field was negative. One reviewer criticized the large amount of required relocations, the appalling length of the numbers, but mostly the erudite instructions and reduced amount of cross-references made the system difficult to use (Hinton, 1966, pp. 396-401). The changes were announced in a defensive and prickly way that openly criticized librarians’ reactions and perceptions of the *DDC* that caused the reviewer to comment on the “vitriolic tone” and “rigid fanaticism” of the editors for their new philosophy (Hinton, 1966, p. 396). The defensiveness and convenient invocation of Dewey can be detected in such statements as, “In short, the *DDC* has been criticized in large part for not being what it does not set out to be” (1965, p. 16). He shamed practitioners by invoking Dewey: “Melvil Dewey's Yankee ingenuity would be

outraged by the thought that librarians were unable to devise ways by which an outmoded past could be prevented from tyrannizing over the future. We ourselves have great faith in the adaptability of librarians and in their ability to devise techniques by which to ‘cope’” (1965, p. 47).

Authority. The authority asserted by the editorial committee in this edition is expressed in a few ways, and in a fashion that alienates the catalogers who use the system. It also attempts to shed Dewey’s authority, by only partially using the reformed spelling (p. 57) and attempting to retain more theoretical consistency. Custer wrote that remarks and examples in Dewey’s original introduction “are now obsolete, and it should be read in the context of its time” (p. 61). However, Dewey is invoked when he serves as a convenient response to criticism. Throughout the introduction, repeated references to the criticism leveled at the system occur and are typically followed by references to the impossibility of finding a perfect system. They emphasize the inclusion of the work of experts, “the intense efforts of specialists in librarianship, in subject classification, and in the countless disciplines of which the world of knowledge is composed, from religion to mathematics to musicology to public administration to aeronautical engineering” (1965, p. 6) as if pointing out their expertise exceeds that of practitioners. Perhaps anticipating criticism over the significant changes to the relative index, Custer thanks Marie Henshaw for her work, “including also the new index, which is almost wholly hers in conception and mostly hers in execution” (p. 60). The condescension and disregard of the wants and needs of the field, express a feeling of righteousness, seemingly intended to stifle criticism. Finally, the large “DEWEY Decimal Classification” with a large registered

trademark symbol in the title page reminds users that it is a sanctioned and protected entity.

Rhetorical Space. Despite the controversy of the edition, Custer (1972), later in the *Encyclopedia of Library and Information Science* called the changes “Unabashedly progressive” (p. 139). The editorial team’s focus on the “integrity of numbers,” resulted in many overdue changes made to the system. In the prefatory works Custer recognized the “haphazard groupings of terms” and returned subjects to the appropriate disciplinary hierarchy. He wrote, “This edition emphasizes the hierarchical nature of true classification and restores the hierarchical feature of Dewey’s notation” (1965, p. 44). Indeed, after 80 years, women finally were transplanted from the problematic **396 Customs, Costumes, Folklore** class, and men gained a class of their own. Since the placement of women in that class violated hierarchical force, or what Custer called the “drip” principle, women, and, for the first time men, were transplanted to **301.4 Institutions and Groups**, positioning them as social groups.

Knowing, however, that the editors were focusing on the drip principle, this also meant that they were also posed as **Social characteristics and problems**.

301.41 **The sexes**

.411 **Man**

.412 **Woman**. Scope: feminism, superiority

.412 1 **Emancipation**

.412 2 **Careers**

.412 6 **In the home**

.412 9 **In history, public affairs, war**

Despite gaining a heading, **Man** seemed to be a perfunctory complement to **Woman**, as it had no parallel subheadings, or any subheadings at all. The scope note indicating radical feminist notions of superiority added an air of antagonism reflecting second-wave feminism.

Adding to the sexes as a “social problem” and recognizing the sexual liberation of the 1960s was the addition of sexuality concepts to the class. If “social group” takes the social sciences definition of a group “bound together by patterns of interaction,” (*OED*) that interaction here is sex. The contents of what had previously existed separately in **Sexual ethics** were emptied into **The sexes** to create a hybrid where all the subclasses all relate to sexuality, and as allied topics, the relationship between men and women is a sexual problem. The other subdivisions include:

.413 **Celibacy**

.414 **Courtship** 301.425 Including preparation for marriage

.415 Sex life outside marriage; Concubinage, premarital relations, adultery, prostitution, homosexuality and other perversions

Transsexuality does not appear anywhere in the classification or index. The “other perversions” does not include **Transvestism**, which appears in the index, although users must see **Sexual disorders**, which consequently pathologizes it as a medical issue, dripping down under **Other Diseases/Psychoneuroses**. With no class headings, it ends up in **Other disorders**, allied with an array of “deviances”:

616.858 3 Sexual aberrations, manias, perversions

.858 32 Frigidity and impotence

.858 33 Nymphomania and satyromania

.858 34 Homosexuality

.858 35 Sadism and masochism

.858 39 Other disorders

.858 4 Other character neuroses

.858 42 Kleptomania

.858 43 Pyromania

.858 44 Homicidal and suicidal compulsions

.858 45 Compulsive lying and defrauding

.858 8 Mental deficiency Feeble-mindedness and mental retardation

The following class in the .858s includes **Idiots, Imbeciles, Morons, and Borderline Feeble-minded**. The structure clearly communicates that transvestism is a pathological disease of deviancy.

“Intersex” suffers a similarly humiliating fate, as **hermaphroditic reproduction** is the only term that appears in the relative index, directing catalogers to “see **Reproduction**.” However, hermaphroditic reproduction refers to animals that have the ability to self-fertilize, and although the reproductive organs manifest the condition, intersex people are often unable to reproduce, so intersex people were effectively erased from this edition. Hermaphrodites had been cut from the *DDC*, along with much of the content of the controversial fifteenth edition of 1951; however, **Hermaphroditism/ animal physiology** (allied with **conjugation** and **sexual reproduction**) had been restored in the 1958 sixteenth edition, so it is unclear why it would be removed once again.

Necessary and Sufficient Conditions. The “drip” principle, or hierarchical force, reveals how the editors defined concepts. The adversarial feeling of the placement of the

sexes as a “social problem,” along with the antagonism of the “superiority” scope note indicate more difference than commonality between the sexes. In the relative index, “sex” refers to biology (current usage of “sex”) and psychology (current usage of “gender”). In “sex psychology,” the concept of gender appeared, but still under the name of “sex,” and laden with sexuality:

155.3 Sex psychology

.31 erogenity and libido

.32 sex and personality

.33 sex differences

.332 Masculinity

.333 Femininity

.334 Bisexuality

.34 sex relations

Masculinity and femininity refer to what we would now call “gender roles.” The term bisexuality in the nineteenth century had originally referred to hermaphroditism, but by this time had connotations of its current usage in sexual orientation. WorldCat indicates that the current usage was present but only emerging in publications during that time. It is unclear which usage is meant here, as the index only refers to “sex difference” or if it meant something entirely different, such as androgyny, which does not appear in the relative index. Sex had not entirely departed from biology, as **577.8 Sex in nature—biological differentiation, ratios** lumping humans and animals together.

Universality/Fallibility. Custer repeatedly emphasizes that the pace of knowledge necessitates change, acknowledging both that knowledge changes and that classification is an imperfect instrument that will evolve with the times. He writes, “It appears unlikely that this or any other general classification will ever be ‘perfect,’ especially in view of the traditional dichotomy of demands for a system that will be both stable and up-to-date” (p. 61). He seems to be responding to a vein of criticism that assumes a perfect classification could exist. He defensively notes, “The faults inherent in the *DDC* are many. No serious student of classification since 1876 has failed to note them” (p.15). He also recognizes the importance of perspective and its role as a stumbling block in classification, at least in Western structures: “No system of classification can assemble at one point all that each student or reader may want on the topic of his current interest, because no two students or readers are alike” (p. 16). He acknowledges, “Classification shares with other human productions the attribute of imperfection” and accepts the fallibility with the platonic goals of progressing toward excellence: “The Committee hopes that this edition will be found better than its predecessors. It also hopes that future editions will be better still” (pp. 3-4).

Additionally, more attention was paid to international users of the system, admitting to the culturally centric perspective of the system. Their subjectivity was at least perfunctorily sought as two editors “Miss Sarah K. Vann, assisted by Miss Pauline A. Seely visited 23 countries thruout the world to discuss with librarians in the field the deficiencies of the *Dewey Decimal Classification* that have been discovered by users outside the United States” (p. 3). Editors also acknowledged cultural bias and curiously vow to violently reduce it, saying that the system “has been much criticized for its

historical bias toward a Protestant Anglo-Saxon culture. Some efforts were made in Edition 16 to reduce this bias, but the present edition represents the first full-scale attack upon it by the general editors” (1965, p. 55). Potentially this reaction was brought on in response to international competition from the UDC.

Ontology. A search in WorldCat indicates an approximate tenfold increase in the amount of work on women between 1850 and 1965 to near 300,000 volumes in English. The titles published between 1958 and 1965 tend toward biographies of notable women or women in particular professions or contexts that indicate a change in women’s status and opportunity. A search for “hermaphrodites” and “human” between 1958 and 1965 retrieves around 140 items in English, showing a significant increase of output on the topic, mostly from a medical or psychological perspective, often in the context of sex differentiation, signaling intersex as a platform for defining the two recognized sexes. On rare occasions the titles suggest relationships between intersexuality and homosexuality. Google Books’ Ngram Viewer shows a steep spike in the term “intersex” in its corpus between 1960 and 1965 (the most significant spike was between 1920 and 1940). The term “hermaphrodite” remains mostly static in the corpus after a large decline from the nineteenth century, but draws significantly more results than intersex (the Ngram results cannot distinguish animal from human intersexuality).

“Transsexualism” between 1850 and 1965 retrieves around 30 titles along with an assortment of archival material from underground transsexual organizations or personal papers of transsexuals that came from the period but may not have been collected until later. About half of the literature is medical studies by familiar names such

as Benjamin, Burchard, and Green, but the amount of fiction and testimonials increased, showing the curiosity of the public toward the phenomenon. “Transvestism,” searched between 1850 and 1965 retrieves about 300 titles, including serials established around that time and a similar variety of archival material. The non-medical titles often refer to “masquerade” or “impersonator” or “imposters,” which suggests that it is a temporary condition intended for to deceive. A number of titillating titles appear, such as *Muscle Man in Silks* from 1963. The medical-psychological literature is overwhelmingly Havelock Ellis’s and David Cauldwell’s, who seem to be responsible for pathologizing cross-dressing. Here the assumed connection to deviancy and homosexuality are clear.

Summary of Seventeenth Edition

The women’s movement as well as research into sex and gender likely spurred change in the *DDC*, but with women presented as both a social problem and a sexual object, change would occur only fifteen years later. With the attention on Christine Jorgenson, it was impossible to avoid topics related to transgenderism and transsexualism. Intersexuality seems to continue to hold attention, but with uncertainty of what to do with it. The next edition would bring another attempt to appease women, but a change in view of intersexuality from something different to something wrong.

Nineteenth Edition, 1979

The nineteenth centennial edition of the *DDC* expanded to around 3,000 pages, with Custer still as editor, and this time, his name was on the title page: “*Edited under the direction of BENJAMIN A. CUSTER*” (emphasis in original), though Dewey’s name continued to be displayed more prominently. The tone in the prefatory material was much

more conciliatory toward catalogers than the seventeenth edition had been. Nine years prior to the publication of this edition in 1970, the ALA's Feminist Task Force of the Social Responsibility Round Table had been founded, which led to a decade of activism including not only employment issues in the field, but also working toward "nonsexist cataloging" (Maack, 1994, p. 232). A note in the users' guide signals this sensitivity, perhaps not as conciliatorily:

an extensive repetition of pronouns to denote the classifier is unavoidable. While realizing that some readers will find distasteful the constant use of 'he,' 'his,' and 'him,' to refer generically to classifiers of both sexes, the editors and the Decimal Classification Editorial Policy Committee find any other device or circumlocution either awkward or artificial, or an intrusion upon the sense of the exposition, and they have agreed to use the traditional masculine forms in their generic sense. (p. *xxvii*)

The impatience expressed with women intruding on an easier way of doing things and reversion to the "traditional masculine" also indicates first, a reminder of who holds power, second, an appeal to the authority of writing guidelines or grammar rules to avoid any awkward construction, and third and more broadly, how the English language's reliance on gendered pronouns restricts our ability to avoid gendering any discussion of people. If the previous edition had focused on worldwide knowledge, the nineteenth edition reverted its attention back to North America.

Authority. Continuing the theme of the imperfection of classification, the chair of the editorial committee John Comaromi wrote, "We are well aware of its imperfections, perhaps inherent in the very nature of classification systems, and again urge you, the

users of the *DDC* to continue to provide us with your ever-welcome advice and suggestions” (p. xvii). Perhaps because of the vigorous criticism and the angry response toward the previous editions, the committee wrote as a committee, and then provided an explanation of how each edition is created, perhaps trying to get the readers to recognize the complexity of the process and the need to please many masters:

Then, taking into consideration the response of users (including those in the Library of Congress's Decimal Classification Division) to the immediately preceding as well as earlier editions, the editors in consultation with the Decimal Classification Editorial Policy Committee and the Forest Press Committee determine which schedules require what degree of revision and review, from full phoenix treatment, which provides a totally new development on the old base number, to routine review, which may be little more than modification of the text to conform to changes in the editorial rules. Major revisions are prepared with the advice of subject experts. All revision includes at least a routine review of LC's Dewey-classed file to see if the textual provisions of the previous edition have been adequate for the literature and clearly understood by the user. The actual mechanics of setting forth revised text and cross checking every detail constitute a time-consuming and detailed effort. At all times the editors must keep in mind the needs of diverse users, including practitioners in small and large, popular and research libraries, as well as teachers and students. They must also provide guidance for international usage. They must balance innovation against stability, required degree of detail against length of notation. (p. *lxxv*)

Changes are still reluctantly allowed, but require justification. Deviations are “permissible if there is a real and permanent local need. By ‘real’ is meant that each variation should have a demonstrable reason that can be recorded and defended” (p. *lxvii*). This demonstrates impatience with users who perhaps are myopic to their own libraries or provide criticism without solutions.

Some changes in the prefatory material also correspond with the death of Dewey’s son Godfrey in 1977, to whom the edition was “Respectfully Dedicated” in full page, which could indicate the freedom to remove more of Dewey’s direct influence. His “mostly obsolete introduction has been dropped” and a return to conventional spelling was complete, eliminating the remnants of Dewey’s simplified spelling (p. *xxii*).

Rhetorical Space. The “badly crowded’ 301-307 section of Sociology was again structurally overhauled in this edition (called a phoenix schedule) and resulted in yet again moving “sex” (p. *xv*). This time, it took on a more demographic role, and the adversarial tone and sexuality was removed from it. Men earned a scope note that indicated the class was for specific kinds of men, but the obvious omission of occupations and social role indicates the male norm is not yet challenged.

305.3-4 Specific Sexes

305.3 Men

Single, married, divorced, widowed, of various specific racial, ethnic, national language group or adherent to specific religion

305.4 Women

.42 Social role and status

.43 Occupations

.44 Specific kinds of women

Hermaphroditism returned and finally earned a class number, of 616.694, moving from **Physiology** to **Sexual disorders**. Its alliance with **Impotence** and **Sterility** and **Male Climactic disorders** removed it from the realms of reproduction and physiology to issues relating to intercourse, and only to males, as female sexual disorders are classed in gynecology. On a positive note, it was no longer considered a sociopathic sexual disorder, which still included homosexuality and the other deviancies such as kleptomania and nymphomania. The language slightly improved in some of the allied topics—idiots and morons are gone—but feeble-mindedness remained. However, conflictingly, **157 Psychoneuroses** in psychology still included sexual disorders, and similarly the language toned down slightly.

.7 Disorders of character and personality Examples: sexual disorders and dysfunctions, kleptomania, compulsions

.8 Mental deficiency

.9 Clinical psychology. Class clinical psychology of a specific condition with the subject, e.g., of homosexuality 157.7

This means if the topic is approached from a psychological point of view, it is considered psychoneuroses, but from a clinical perspective it is merely a disorder in sexual performance. **Transvestism** changed from a clinical medical issue of a sexual disorder to **Sexual Deviations**, perhaps as a result of the work of such people as Harry Benjamin, whose research discouraged attempts to rehabilitate.

Necessary and Sufficient Conditions. The introduction reminds readers, “To classify a collection of objects is to place together in classes those objects which have

certain characteristics in common and to separate from them the objects which do not have those characteristics” (p. *xxiv*). This edition allows for an increase in ways that humans can be differentiated. The introduction describes a new focus on classifying and labeling people:

persons may be classified, among other ways, according to (1) occupations, (2) physical and mental characteristics, e.g., healthy, blind, mentally retarded, (3) social status, e.g., criminals, unemployed, retired, (4) marriage status, (5) level of cultural development, (6) social and /or economic level, e.g., slaves, middle class, royalty, (7) age, (8) sex, (9) racial, ethnic, national backgrounds. (pp. *xxiv-xxv*)

In terms of psychological sexual difference, the section remains exactly the same as in the seventeenth edition.

155.3 Sex psychology

.31 Erogeneity and libido

.32 Sex and personality

.33 Sex differences

.332 Masculinity

.333 Femininity

.334 Bisexuality

.34 Sex relations

WorldCat indicates that at this time bisexuality was fully with its current usage, and the index newly refers to sex differences for psychology, but to homosexuality for “all other aspects.” Thus, bisexuality is somehow considered a gender in psychology, but considered a disorder in practice like homosexuality. Additionally, the alliance with the

terms “masculinity” and “femininity,” confers heteronormativity to sex practices. As an indication of the drive to class types of people, **Psychology of adults 155.63-155.67** also allows to class by **Specific categories of adults**, which include all the categories mentioned above (marital status, social status, etc.) all broken down by sex.

Universality/Fallibility. Perhaps to remind users that the editors are humans and the classification a human product, the editors once again reminded users of the utility of the instrument but reassured them, “Edition 19... has been faithful to stability where stability is more useful than change, and it has been changed where a new vision serves us better than the old” (p. xv). A nostalgia accompanies this edition, as it was Custer’s last edition, along with being the centennial edition. Additionally, the committee noted that the North American user survey “revealed many problems with the application and use of the *DDC*,” and they pledged to offer more training for users, giving the impression that it was not the classification that was wrong, but rather the users’ incorrect application that was wrong (p. xvi).

Ontology. WorldCat unsurprisingly shows another substantial increase of about 171,000 for titles about women published between 1965 and 1979, including over 40 items with the simple title “Women.” Google Books’ Ngram Viewer shows this time period as the beginning of a dramatic spike in the appearance of the term “women” that continued on an upwards trajectory until peaking in 1995. Similarly to the previous timeframe, the titles focus on women’s status, notable women, and women in particular professions, with an uptick in works about women’s roles in history and of course women’s activism.

“Intersex” in WorldCat brings up around 300 entries in English, although about an estimated third tend to be on animals rather than humans. Titles often refer to the “problem” or the “disorder” of intersexuality. A search on “Hermaphrodites and human” from the same period retrieves around 350 results, indicating that the terminology was still in transition. The titles on hermaphrodites continue with the urology and endocrinology texts as before, but include slightly more reference to identity considerations such as gender roles. The references to intersex as curiosities or monstrosities gave way to terms such as “freaks” or “fringe” or “abnormal.” Most of the medical titles refer to chromosomal or hormonal combinations and commonly reference “true” hermaphrodites, which in the nineteenth century referred to people who supposedly possess complete sets of both female and male sex organs, but in this timeframe refer to people with a specific and rare chromosomal combination. Ngram Viewer during this timeframe show only a slight decline in occurrences of “hermaphrodite” and a slight increase in occurrences of “intersex.”

“Transgender” still does not appear in Ngram Viewer, but “transsexual” begins a modest but significant increase between 1970 and 1978. In WorldCat, around 600 results for transsexualism appear in English, including 11 doctoral dissertations. Transsexuality titles refer more often to surgery and the psychological aspects of living life post-operatively (from the perspective of the psychologist), and also bring up contextual issues such religion, marriage, and the law, and continue to be associated with both transvestism and homosexuality. Many titles refer to psychoanalytic aspects of transsexuality. Also evident are more self-help titles and periodicals that guide individuals through processes

or identity formation (e.g. *The Transvestite Survival Manual* or *Who am I?: The Transsexual [sic] Dilemma*).

Summary of Nineteenth Edition

Overall, the nineteenth edition of the *DDC* reflects an attempt to increase equity of representation for women in the classification by balancing the entries in 305, even if it tends to be an empty gesture. On the other hand, the editors still resist acts of inclusiveness such as continuing to use sexist pronouns under the guise of convenience, which lends a sense of annoyance at women's disruption of the status quo. An essentialized sense of gender characteristics continues as "sex psychology" remains, along with an increase of ways to class people by gender or other demographic characteristics, also with the assumptions these are innate characteristics. Representation is restored for intersex people, although now their classification as a male disorder in their own class is only slightly preferable to being classed in a category to which they do not share anything in common. Transsexualism, despite overwhelming literary warrant, remains inaccurately absent or subsumed with transvestism.

Conclusion

The rapid changes in the gender classification in the *DDC* after 80 years naturally should be caused by changes in the literature; however, the various epistemic clues investigated here suggest that other influences are also at play. The dynamicity in the *DDC* reflects the confusion in the medical literature, while the legal discourse digs in its heels against the changes in perceptions of gender. In the following chapter, these changes and epistemic clues are evaluated and discussed in terms of known epistemic outlooks. This final chapter identifies epistemic values underlying the three discourses,

and shows the interplay of these discourses as they merge to define sex and gender across the three timeframes.

Chapter 6: Conclusions

A.C. Foskett famously wrote in 1971 that a classification system is “likely to reflect both the prejudices of its time and those of its author,” yet classificationists strive for and claim “some kind of eternal and external truth” (p. 117). In the nineteenth century, authority for the formal legal and medical definitions and classifications of sex for women and intersex lay undoubtedly with men, with trans people absent from the discourse altogether. Unsurprisingly, the “enunciative modalities,” as Foucault calls those who are authorized to speak, include educated, elite, white men who had access to those particular fields. Women had barely made it into the professions of medicine, law, or librarianship in the United States, with the first officially accepted to practice in 1849 for medicine, 1869 for law, and 1871 for librarianship. Intersexuality was consistently present in discourses since long before the eighteenth century; however, non-intersex trans people were rarely discussed in medical discourse and only in passing in legal discourse until the mid-century, after which they were discussed incessantly. As women began to be included in the discourse as knowing subjects, the characteristics ascribed to women began to shift. The previous two chapters laid out the ontological structures and epistemic attitudes toward sex and gender reflected in medical and legal discourse and the *Dewey Decimal Classification* editions across four timeframes. In this chapter, the task is to find any correspondence to epistemic stances as discussed above in knowledge organization or gender literature or elsewhere. Following that, the implications to knowledge organization will be discussed.

If acknowledgement of epistemic approach is important to recognizing the perspective of the classification and also the ontological justification, then the

consequences can be considered in the design or revision of further classifications. Hjørland & Hartel (2003) argue that no “pure,” singular epistemic stance controls perception of a work, but rather the view of the discipline or profession. Moreover, as discussed previously, only the metanarrative of the field during a particular moment in time is evaluated for its epistemic values, acknowledging that the stance held by all participants is not uniform, as all of the examined discourses exhibit partial, fragmented and even opposing stances. On occasion, conflicting views are held, such as a positivist view supported by a realist justification. Just as the identified stances may not be uniform, also, the discursive pool from which the clues were drawn is also diverse. The stances are evinced from clues repeated across the discourses. Foucault did not want his discursive methods to be exploited as a tool of positivism, where conclusions are drawn broadly from limited observations. Thus, the conclusions described here refer to the stances as the most frequently expressed views, but do not purport to be generalized across the entire discursive body.

Another complication is that of perspective. Although it seems like a quirk of bibliographic classification that a work may be classed in different places depending on its use, the same phenomenon occurs elsewhere. This corresponds to Foucault’s view that all the competing angles merge to create a discursively-constructed concept at particular points in time rather than a cohesive, universal and transcendent concept, even within the same discourse or even the same person. In medical and legal literature, about intersex or trans people for example, similarly-situated people can be deemed a different sex depending on the viewpoint taken by the physician, attorney, court or state. Is the desired sex of that person a transcendent constant despite the chaos of opinions and “facts”

swirling around? Is the “impossibility” because of a postmodern viewpoint of the instability of things, or because of the instability of the world around it? Similarly, the same librarian might have different standpoints at different moments, causing a differing placement in the classification. Is that concept or subject, whatever it is, situated differently because no universal “truth” or external reality exist, or is it placed differently because any concept has different meanings, or is it classed differently because of the context of the information need? Hjørland attributes this to the different uses by the different domains; however, this does not explain how the same person or domain uses a term differently.

The epistemic clues detected in the discourse and classification are pieced together alongside the methodologies to see what values or emphases expressed by the discursive community correspond with known epistemic theories. Many epistemic stances are developed by philosophers or philosophers of science rather than practitioners, so some stances need to be “translated” into praxis, and conversely, some positions discussed in terms of subjects in bibliographic classification also need “translation” into the legal or scientific realms. Hjørland (2001) writes, “Because any document can, in principle, provide answers to an infinity of questions, subject analyses should establish priorities based on the specific user groups served... The subject of a document is thus relative to the aim of the specific information service” (p. 776). Rather than considering the sex and gender as “the subject of a document,” the “aboutness” identified in the discourse are used to understand those community priorities. As described in the methodology, a starting point for determining epistemic methodological priorities of the discursive community is Hjørland’s (2002) summary of schools of epistemic thought (see

Figure 1), used initially to drill down to each discourse’s interest or priorities and then further explored into more specific stances within the broader school of thought.

Table 2 (adapted from Hjørland, 2002, p.269)
Simplified relevance criteria in four epistemological schools

Empiricism	Rationalism	Historicism	Pragmatism
Relevant: Observations, sense-data. Induction from collections of observational data. Intersubjectively controlled data.	Relevant: Pure thinking, logic, mathematical models, computer modeling, systems of axioms, definitions and theorems.	Relevant: Background knowledge about preunderstanding, theories, conceptions, contexts, historical developments and evolutionary perspectives.	Relevant: Information about goals and values and consequences both involving the researcher and the object of research (subject and object).
Non-relevant: Speculations, knowledge transmitted from authorities. “Book knowledge” (“reading nature, not books”). Data about the observers’ assumptions and pre- understanding.	Low priority is given to empirical data because such data must be organized in accordance with principles which cannot come from experience.	Low priority is given to decontextualized data of which the meanings cannot be interpreted. Intersubjectively controlled data are often seen as trivia.	Low priority (or outright suspicion) is given to claimed value free or neutral information society.

Additionally, other inventories of epistemic stances such as Budd (2001), Hjørland and Nicholaisen’s *Epistemological Lifeboat* (2008), as well as individual works describing epistemic stances such as those described in the literature review are consulted to determine the characteristics and criteria used to make decisions about the subject. It must be acknowledged that it is impossible to present the epistemic arguments with a full history and discussion of nuances, so the characteristics of the stances will be necessarily reductive to gain a broad sense of the epistemology at play. Finally, a particular discourse may be exhibiting the characteristics of an epistemic stance prior to it being articulated by philosophers until a later point in history.

Some of the other questions addressed in this chapter include whether all three discourses take the same or similar epistemic outlooks, how and to what degree they influence each other, and finally, what this means to classification. This chapter traces the epistemic shifting, in the form of legal and medical classifications and their relationship

with changes in the *Dewey Decimal Classification*. I first revisit and analyze the findings of the previous chapter from an epistemic perspective to find epistemic alignment or departure, summarizing the characteristics of each discourse, asking who comprises the “user groups” or who Hjørland would identify as those having a stake in the definitions created in their domain for each discourse and what their priorities are, noting similarities, crossover, and difference, and identifying what epistemic stance seems to be at work. Then, I discuss the social consequences of that identification to gender categories, particularly in terms of the characteristics of oppression or subjection as described in chapter one. Finally, I close with the implications to knowledge organization and areas for future research.

Law

“User Groups” and their Interests

Women and men. Parsons (1741), in his legal treatise on hermaphroditism, writes, “Doubt is the only Path to Truth; for by this we examine, search, and discern Truth from Error; Natural History affords Examples enough of Falsehoods copy’d and passed down from Age to Age, through the whole Class of Writers who never doubted each other, and consequently were never able to know the Truth of Things, upon which Volumes have been wrote” (p. 10). In other words, he critiques the authority of those who talk amongst themselves and maintain power for their own self-interest, despite evidence to the contrary, to the detriment of an excluded population. A century later, the approach had changed little in the legal field. Egregiously protecting their self-interests, the legal profession created a circular and insular domain that resisted women’s ability to join institutions of power and thus have a voice in defining their rights. The legal profession purposefully and explicitly excluded women from holding any positions, and later any

positions of power within the field, justifying their decisions with either the “law of nature” or the circular argument that women did not have particular rights because they were illegal. This resulted in an epistemological echo-chamber that excluded the subjective voices of women until the 1970s.

Along with the exclusionary, self-protecting practices of the bar, economic concerns form the core of most legal decisions that “define” sex and gender, either directly or indirectly. Initially, keeping property and power in the arms of men seems to be a driving force based on the rights afforded women. In his medical jurisprudence text, Dean (1866) writes that lawyers need to have an “intimate knowledge” of the laws related to sex in order to “regulate the descent of property;” however, since in the United States “males and females are regarded alike,” in terms of property ownership, and therefore, “impotence and sterility” should be the focus of the decisions (p. 17). Even though women’s rights changed by 1866, with the Married Women’s Property Act, the dominant definition in the legal dictionaries remained with the outdated language for another 50 years.

Power was not restricted to the economic realm. Laws necessarily have a coercive or disciplining effect on the populace that enforces the normativity expressed by the particular law. The coercion is backed by sanctions or, in some cases, violence, with the idea that it will prevent and punish the undesired behavior. Undoubtedly sanctions exist for the condition of being a woman or non-conforming body in nineteenth-century law. The ability to violently “restrain her of her liberty” exemplifies the legal coercive effect men could have extra-legally (*Bouvier’s*, 1948, p. 512). Making the home the realm of women enables men to avoid the responsibility of doing unpleasant housework and what

they considered other dulling domestic tasks.² Consequently, women are excluded from the rhetorical and real space of the profession, leading to their exclusion from other public institutions. Overall, the legal knowledge creation regarding women specifically is made by men with seeming self-interest in maintaining their own rights and power. Eighty years later, not much had changed.

During the limbo period of the 1950s to mid-60s, women occupied a legally precarious position. Though they had gained some rights by this time, such as universal suffrage in 1920, in the eyes of the law, women were not equal, and would not be considered so until the Civil Rights Act of 1964. Compared to Lavinia Goodell's nineteenth-century application to the bar, the discursive tone turned from condescending to outwardly vicious as women began to encroach on the legal field. Although women were also universally admitted to the bar at this time and were increasingly entering law school, they still had little voice in the rhetorical space of the discourse, because their legal inequality resulted in powerlessness. This meant they had no recourse against discrimination, power, or opportunity for self-definition, even if they had access. Though entering the field was the opportunity for women to join the discourse and perhaps exercise subjectivity to change perceptions, this was vigorously resisted. Thus, despite having access and limited membership in the field, the discourse was still controlled by men whose main priority was to keep this control. Feminist legal literature acknowledges that the legal field was particularly brutal, more so than other fields, and this entitlement was based on their recognition of their legal untouchability.

² Although this seems like speculation, a report by the World Bank (2012) on gender and time use reported that worldwide, in both developed and developing nations, men still resist unpaid work such as housework and child care, even as more and more of women's time is spent in the workforce.

Similarly to the nineteenth century, the result of this entrenchment was the legal sanctioning of women as “other.” The discourse reflects that women were seen as unnaturally forcing their way into men’s institutions. The legal definitions reflected a tone of nostalgia for how things previously had been better for men in the past. Perhaps these priorities can be seen as the response to the “decline of the masculine” that occurred in the 1950s and 60s. “Othering” of women occurred in other forms during this timeframe, such as the establishment of sex as an organizing principle on ID cards, as well as the inclusion of stereotyped, gendered psychological profiles as evidence in trials, where femininity is positioned as a failure of masculinity.

In the next decade, once the Civil Rights Act had been in effect, women had limited access and some rights recognized. The 1970s were spent litigating the rights recognized by the Civil Rights Act, and consequently most of the legal discourse surrounding women occurred in the realm of employment law and often came in the form of fighting against the essentialism, “othering,” and determinism entrenched in the male-dominated worlds of commerce, law, medicine and politics. In medicine, similar discourse shows the conditions for women physicians, medicine was continuing its integration with the discourse of psychology. With the surge of sex-reassignment procedures in the 50s and 60s, trans and intersex marriages and divorces began to surface in legal discourse.

The legal discourse shows the shifting priorities of the user groups, as newly-protected women fought to gain equal treatment in the workplaces as outlined by the Civil Rights Act. The opposing men fought equally hard to prevent them from entering the male-dominated professions, and women worked to close loopholes, such as through

the Pregnancy Discrimination Act of 1978 and *Barnes v. Costle* (1977), which, on appeal, banned sexual harassment in the workplace. If in the 1950s and 60s, the law had not kept up with social change, in the 1970s for women, the social change had not kept up with the law. Though women were now equal in the eyes of the law, the law had not changed social behavior, symbolized by the failed Equal Rights Amendment. One priority of the major law firms, then, was to show compliance with the Civil Rights Act, but at the most minimum level possible while not changing behavior. However, the limited access that women were able to forge, in combination with the platform of the Civil Rights, resulted in the being able to control a small piece of the discourse, more so than in the 50s.

Intersex people. Similarly, the nineteenth century legal discourse relating to intersex people refers to marriage, divorce, and voting, (and alleged fraud therein). This too relies in practice on social norms but professes a moral purpose (rightfully regulating property, preventing same-sex relationships, protecting women who are “true” women). In intersex Levi Suydam’s alleged voter fraud case, for example, Suydam’s vote would have broken a tie; consequently, the decision as to his sex held stakes of interest to the outcome of the election. Had the election not been contested, his sex would have been less likely been questioned. Legal literature on intersex people from the time relies heavily on the opinions of medical professionals to make these decisions, but with an even stronger reliance on gender roles and gendered norms. Despite that intersex people signified a departure from the “law of nature,” attorneys did not stop invoking it backwards by ascribing sex based on characteristics rather than characteristics by sex. Intersex people seemed like they wanted to live their lives as they pleased, except in such cases as the woman who was unsure if she could legally marry.

By the mid-century legal discourse regarding intersex people began to move away from the language of “monstrosities,” and view “hermaphrodites” in medical terms rather than by social characteristics, although social characteristics still figure into sex determination. It also recognizes variance rather than the mythical “perfect hermaphrodite.” However, it again reinforces legal authority, dismissing the idea that an intersex person knows best which gender with which to identify.

Trans people. Trans people did not appear in the legal discourse until the 50s, but only minimally until the 1970s, when the interests seemed to be arguing morality, maintaining heteronormativity, and once again regulating property rights. Following the Christine Jorgenson sex reassignment surgery, many of the typical economic concerns of law (descent of property, marriage, divorce) had not yet emerged because during this timeframe people were just beginning to have the surgeries and other treatments; marriage and divorce conflicts would arise later. Some effort toward preventing sex reassignment surgery occurred through the threat of lawsuits to surgeons who would ostensibly be committing “mayhem.” Though since no one was prosecuted, it is unclear whether the mayhem threats were rumor or reality. If it happened, typically this type of charge would originate from a state or local jurisdiction brought up by a prosecutor motivated by social pressure or seeking publicity. As time passed and legal loopholes such as vagrancy laws and fraud began to be applied to trans behavior, a certain strand of discourse began to argue that trans behavior was harmless and they should be left alone. Other efforts, such as the standardization movement, succeeded in reinforcing sex as an organizing principle despite the social differences incrementally dissipating. Although the

standardization of identification documents also reinforced the binary aspects of sex and gender, it was not rigorously enforced for trans people.

Conclusion to User Groups and Interests

Overall, it appears that the interests and priorities expressed in the legal discourse continue to maintain the exclusion in each timeframe, but since social norms were shifting—women were working in “men’s professions;” the public was fascinated with trans people—they were required to work harder at “othering” women and trans individuals. “Othering” serves as a tactic to preserve the difference previously attributed to the “law of nature,” but since the “law of nature” was losing credibility, they tried to create conditions that would sustain the artificial but still legally enforced difference. It also had a dehumanizing effect, repeatedly calling attention to the alleged inferiority caused by membership in a category.

Legal epistemology—Justification of the ontological decisions

Women and men. In the nineteenth century, the ontological characteristics of the concept of woman, as evident in the legal discourse include that women possess innate traits as delicacy, timidity, weakness and piety; they are innately nurturing, maternal, caring, yet incapable and unfit for public service. They have high voices and a tendency to try to control their husbands. These traits suit them for the home and childrearing and are celebrated as positive and ideal qualities in the female sex. These are reinforced in opposition to men’s characteristics through active “othering” and presented as immutable. Grosz (1994) calls this type of metaphysical essentialism “naturalism,” where “women's nature is derived from God-given attributes that are not explicable or observable simply in biological terms” (p. 84).

Methodologically, the knowledge of these traits is generated by observation by the men who serve as enunciative modalities within the profession and are applied absolutely to all women through logical deduction and attributed to the “law of nature” or the law of the land (i.e. women cannot vote because it is illegal). What they are observing consists of social norms within the experience of an advantaged, white circle and intuited broadly. The uncritical deferrals to the law of nature and the law of the land indicates that no critical reflection occurred on why these conditions occur. In the 1950s and 60s, this changes little, other than that the language changes slightly to become more insulting than condescending. Words such as “delicate” are replaced with “weak” or “incompetent” and rather than overtly stating that these traits are a result of the law of nature, the biological imperatives of reproduction and physical weakness are blamed. These immutable but unproven traits serve as a justification for determinism. In this time period, psychological observations gain legitimacy with the law, but they fit into an existing framework based on social norms.

The approach taken by the men opposed to women’s rights results in a reverse version of “strategic essentialism” as articulated by Spivak (1993). In the feminist version, women who do not accept the existence of innate characteristics that all women share band together strategically to grasp political power that would be otherwise unattainable if they did not believe in “women” as a group or concept. In this context, however, the legal literature repeatedly references men being controlled by women indicating that men do not actually think women are weak or unpowerful, but essentialize them as such in order to restrict their political power. Another related position is “conferralist essentialism,” which is Sveinsdottir’s (2008) antirealist version. She argues that the

essentialism is “conferred,” rather than “real” in that the essential qualities are being conferred based on our values or “expressed in our conceptual practices,” rather than what is “real” (Sveinsdottir, 2008, p. 1). Therefore, in this example, the qualities of delicacy would characterize what Sveinsdottir would call “ideal versions” almost like prototypes, with the possibility of exceptions. This suggests a metaphysical immutability deployed for the purpose of exclusion.

Despite this, rights were recognized as a result of the critical examination of the reasoning presented by groups above. The opposing voices, those that led to the recognition of women’s rights also relied on observation, but using an inductive approach that resisted creating “laws” about the nature of women that were logically applied to all women, instead focusing on the individual observed cases in individual situations. Additionally, social pressure toward civil rights had led to legislation designed to alleviate the difficult-to-justify extreme inequality experienced by blacks, and though women were persecuted for the same reasons, women were able capitalize on those opportunities to have their own rights recognized. Thus, because of the Civil Rights Act, these individual cases provided opportunities, little by little, for women to join the discourse and join in the knowledge-generation, even if they were not originally intended to be the primary beneficiaries of the legislation.

Though the “methodology” at work in the legal discourse is not experimental in a controlled environment, it seems the dominant enacted epistemology expressed in the legal discourse, at least until the Civil rights Act, is positivistic, where the authorities or “enunciative modalities” observe women in the context of social conventions to find or intuit “facts” about them, and create deductive conclusions based on these observations.

Budd (2001) calls positivism “deterministic scientism,” and criticizes its tendency to create absolute theories from observation (p. 96). Absolutist “laws” can be dangerous, as rationalism accepts intuition as a form of “rational insight,” as long as it can be verified through observation (Markie, 2013). The observations originate from within the parameters of their experience (*a priori* knowledge not recognized). The “feelings” of the object are also discounted because they resist verification from the observer. This approach can be expressed in a rough syllogism:

P1. All women, according to the law of nature/science/biology (verified through observations), are delicate (maternal, etc.) and must be protected.

P2: The profession of law (insert any domain outside the home) is harsh and terrible.

C: Therefore, women must be protected from the profession of law (or other domain).

Though the language changes over the time, the underlying reasoning changes little, with no critical reflection of why these conditions are the way they are. In the 60s and 70s, the “law of nature” is defined more specifically in terms of women’s reproductive “responsibilities” rather than only for their delicacy. Rather than using the moral requirement that women stay home with their children, the professed justification was pragmatic and economic: Women’s inevitable reproductive requirements inconveniences workplaces, divides the women’s attention, and consequently, clients would not trust them and they would lose business.

Bentz & Shapiro (1998) summarize the characteristics of positivism, and eight of the points from their summary follow. For each I outline how the approach taken in the legal discourse matches the methodology and epistemic justifications for positivism:

1. *Knowledge consists primarily of turning “facts,” derived from observation, into sciences organized according to theories formulated as general laws* (p. 177):

Here the observed data that women are nurturing stem from their social position and the social position of the men observing them (e.g. a privileged group observing within their social circle, communicative modalities, etc.), yet is treated as a generalized fact of nature based on limited observations. The condition of being maternal is not “proven” through observation, but rather intuited, as the feelings of the object are not considered. The absolutist approach excludes evidence outside of white, affluent women, or any women’s experience that might replicate the harshness of the domains from which they hope to exclude women. *A priori* knowledge is not valued, so no information about women outside of the experience of the observers is considered. Sojourner Truth’s (1851) famous “Ain’t I a Woman?” speech exemplifies the contrast in experience:

That man over there says that women need to be helped into carriages, and lifted over ditches, and to have the best place everywhere. Nobody ever helps me into carriages, or over mud-puddles, or gives me any best place! And ain't I a woman? Look at me! Look at my arm! I have ploughed and planted, and gathered into barns, and no man could head me! And ain't I a woman? I

could work as much and eat as much as a man - when I could get it
- and bear the lash as well! And ain't I a woman?

The incorporation of psychological observations in the 50s and 60s, though seemingly adding subjectivity, were positioned within the framework of pre-existing “laws” about sex.

2. *Only hypotheses that can be formulated as potential general laws involving relationships among measurable variables and verified through experiment and sensory observation can count as knowledge. These laws are what constitute explanation* (p. 179): Philosophical dilemmas are deemed irrelevant and irrational. Although the measurability of women’s delicacy is questionable, if the privileged men speaking here observe only women in their capacities as wives and mothers, they may generalize from their limited experience and proclaim that what “is” without any critical examination of why it “is.” It then morphs into a deterministic, unquestioned “law of nature.” Creating a physical reason crucially gives these qualities immutability. According to Grosz (1994), biological traits “constitute an unalterable bedrock of identity, the attribution of biologicistic characteristics amounts to a permanent form of social containment for women” (p. 84). Similarly, another “law” to which the reasoning referred is the actual law: women cannot vote because it is illegal.
3. *Values have no relevance to science except as expressions of irrational human emotions and preferences...the entire realm of values, the “ought,” and the normative need to be rigorously excluded from science* (p. 180): The normative (“should” or “ought”) statements and value judgments are discounted. The

subjective experience, context, or desires of women to prove competence have no bearing on the reasoning for exclusion.

4. *The only things that we can know exist for sure are individual, isolated occasions of observations of the external world* (p. 180): This compounds the circular logic, as without a model of a woman attorney, a woman voter, a non-affluent woman, no observations can be made of one functioning successfully within the public realm of men. Perhaps not in a lab, but in society, experience comes from constant exposure to social norms. Though exceptions exist, they are considered abnormal. At the time, women of a certain class and color reliably could be found in the home, rearing children; any deviations are explainable through some sort of exceptional difference (e.g. the “mannishness” of suffragettes). In other words, the condition of being a woman requires that one remain in domestic sphere because of her natural nurturing qualities. The “law” to which they referred, as we can view through a historical lens, however, was self-created, self-serving, and thus only deterministic as a method of restricting women’s free will.
5. *Knowledge is essentially the product of a “knower” and conceived from the perspective of an individual observer and knower of reality* (p. 181): The “knowers” include men. Women as “knowers” do not count because they approach from a position of no power as the observer and generator of knowledge by merit of being explicitly excluded from the profession.
6. *The fundamental relationship of the knower to reality is essentially a passive or neutral one, consisting primarily of observing facts or sensory data and then building up knowledge from these observed facts and Knowledge serves as a*

means of control, and this orientation toward control is built into knowledge itself

(p. 182): There is no arguing with the law of nature. What “ought” to happen is irrelevant. This leads to determinism.

7. *The observer’s or knower’s context does not enter into knowledge, because context exists just as another source of intruding subjective or irrational elements into the research or knowledge process, and Just as there is no such thing as context, strictly speaking there is no such thing as history, because history is context or situation—and action within that context or situation—that changes over time* (p. 182): Again, culture or social circumstances have no bearing on the reasoning. The emotional and historical separation from the object ostensibly increases objectivity, resulting in more “scientific” results.
8. *Positivism rejects “negative” thinking (social critique and “critical thinking”* (p. 184): Underlying causes (i.e. what makes a woman gentle, nurturing, incompetent, etc.) remain unexamined—they “are” because they are observed that way). No recognition exists that women have been historically positioned at a deficit

Though positivism characterizes the dominant enacted epistemology, by virtue that resistance to this view existed within the profession (the legal discourse also led to the recognition of women’s rights to own property, vote, and eventually be treated equally under the law all originated within the same discourse community), a different epistemic methodology was taken in those cases.

If the positivism used in legal reasoning was absolutist, how did women get any rights recognized in the nineteenth century? The legal decisions that resulted in a

different ontological picture of women took empirical epistemic approaches to how the woman was “defined.” They observed the immediate evidence and drew conclusions based on these observations rather than appealing to pre-existing “theory” or “law,” or, like the opposing side, “laws of nature.” For example, after Justice Ryan’s dissent attributing Lavinia Goodell’s presumed incompatibility with practicing law to be the justified by the “laws of nature,” the majority decision simply stated, “We are satisfied that the applicant possesses all the requisite qualifications as to learning, ability and moral character to entitle her to admission.” They refer to the qualities observed in the applicant, and the applicant alone. They acknowledge Ryan’s dissent is based on “her sex alone,” a generalization rather than on the inductively perceived characteristics. The admission of one woman changes the discourse by adding another voice and changing the observable possibilities.

Although exceptions occurred here and there, women were seen as unequal under the law until the Civil Rights Act of 1964, which dramatically changed the legal ontological definition of a woman from an unequal “other” to an equal. Overnight a new standard existed. Women legally went from being considered individuals to members of a protected class. Although the hypothesis had changed (simply stated, “all women are unequal/different from men” to “all women are equal/the same as men”), the reasoning structure had not. As a profession where women newly had access, the deductive, positivistic approach continued to be employed in legal workplaces to attempt to prohibit or limit women’s entry, still based on the old deterministic reasoning based on biology (modified to include economic interests), which painfully demonstrated the difference between equality and equity. The men attempted to “other” the women to preserve the

status quo that benefitted them or to require women to fit into the model they had structured. However, with women now painted with a wide “equality” brush, they could fight back with the same rationalist structure. Roughly put into a syllogism:

P1: Women, by law, cannot be treated differently on the basis of sex

P2: You are treating women differently on the basis of sex

C: You are breaking the law

It could be viewed as a form of nominalism (a rejection of abstract forms, that only language holds together a concept), or in this case, strategic essentialism. This is not to say that women involved did not believe in common or essential qualities of women, but placing them in a protected class ended up essentializing them in the same manner that the positivistic approach did. Elsewhere in the law, such cases as *Roe v. Wade* take a more critical approach, minimizing the moral aspects and taking a phenomenological, social constructionist stance. Justice Blackmun wrote that “recent attitudinal change, of advancing medical knowledge and techniques, and of new thinking about an old issue” and that “One’s philosophy, one’s experiences, one’s exposure to the raw edges of human existence, one’s religious training, one’s attitudes toward life and family and their values, and the moral standards one establishes and seeks to observe, are all likely to influence and to color one’s thinking and conclusions about abortion. In addition, population growth, pollution, poverty, and racial overtones tend to complicate and not to simplify the problem” (*Roe v. Wade*, 1973). Applying a phenomenological approach, he acknowledges and brackets the “preassumptions” and recognizes intentionality of the stakeholders.

Arguably both the men fighting to keep women “othered” and the women fighting for access had pragmatic purposes for defining sex the way they did. Of course, neither

party would consider the other's pragmatic approaches beneficial to them, which is a tenet of pragmatism—that the “solution” should be beneficial to both subject and object. The women filing lawsuits also took a Marxist, materialist epistemology, also considered a type of pragmatism, in that “our material life conditions (economic conditions in a wide sense) are the most important factors for the development of our knowledge and our subjectivity” (Hjørland, 2008, n.p.). The law firms then took a different economic approach: one of economic hardship. Because women are incompetent, uncommitted, and clients do not trust them, the business will suffer.

Those women who made it into practice and were successful also could be considered to take a standpoint approach in that they view knowledge through the eyes of their group as well as through that of the dominant group. Though a small number of women practiced law throughout the beginning of the twentieth century, they had not yet penetrated the most powerful position within the top firms or within the juridical or political structures from which institutional power emanates, regardless of individual qualifications. Women struggled to navigate the environment so hostile to them. Foucault (1972) identifies this phenomenon as “this will to knowledge, thus reliant on institutional support and distribution, tends to exercise a sort of pressure, a power of constraint upon other forms of discourse (p. 219). Though they had the means to a voice, it was overpowered by the constitutive narrative that they were different from men, that they were biologically insufficient to handle the practice of law.

Intersex people. Methodologically, legally deciding the sex of intersex people tends to take an inductive, empirical, case-by-case approach, if only because the existence of intersex people confounds the intuited, deterministic absolutism required for deduction

(e.g., all men have penises; all women have ovaries, etc.). The inability to make a definitive visual determination (i.e. observation) signifies the limits of observation based on the available scientific knowledge, and also signals the uncertainty of at what point to take the inductive leap. The criteria includes observation and speculation based on “knowledge transmitted from authorities:” medical professionals, or, in especially in the nineteenth century, gossipy stories found in the literature. Those same type of stories in later discourse took the form of case studies, with a less incredulous and more “scientific” tone, focusing heavily on medically-defined characteristics such as chromosomes, external genitalia, etc. The observed data only minimally taken into account are the performed genders, gender identity, or functionality of the “object, thus maintaining the authority and “objectivity” of the observer.

Because of advances in medicine, the legal discourse starting in the 1950s can cite specific medical conditions (chromosomes, hormones) for determining sex and rely slightly less on social behaviors as observed, but those social behaviors become more divided into masculine and feminine in the psychological literature. John Money’s work heavily influences the discourse, and he is regularly cited, although leaving out biology is difficult. As an example, a medical jurisprudence article discusses how although the performed gender of an intersex child was recommended to be “chosen” by physicians and parents, based on their “psychic sex,” here meaning social indicators rather than biological features. Money’s term “gender role” appears, but it is minimized as the “seventh and last criterion,” and they indicate it should be subordinated to how well the external genitalia “lend themselves to surgical reconstruction in conformity with assigned sex,” citing Money again (Bowman & Engle, 1960, p. 295, 302). Attempts are made at

classification based on medical characteristics, but binaries continue to be upheld, as dictated by social roles and convenience of the medical team, indicating the same fundamentalism in the belief in “natural” sex roles, even when biology defies those assignments.

Trans people. Intersex people were a perennial object of study, but in the 1950s they took a lower priority than the newer curiosity: trans people. For trans people, it seems the legal discourse intends to protect morality or at least protect traditional sex definitions in order to enforce heteronormativity. The inclusion of gendered psychological inventories in litigation might on the surface seem to increase subjectivity, but instead it was used against people to reinforce stereotypical views of femininity and masculinity and present femininity as failed masculinity. The legal silence during the 1950s and 60s seems to indicate that the newness of the trans phenomena had not yet hit the mainstream, or at least not the idea that a justiciable issue had ripened.

Though no laws specifically against transsexuality existed, the search for ways to make it illegal seems to indicate a reach toward a sort of morality. Something seemed unnatural about it, and again a potential violation of the “law of nature,” communicated the fundamentalism underlying sex. Additionally, the discourse begins to emphasize the heteronormativity of institutions such as marriage to reinforce the law of nature. The initial silence could indicate many things, but Christine Jorgenson caused a large underground group to surface and have a voice previously considered too shameful to speak. The descent of property related to the validity of marriage dominated, but additional issues arose with government IDs. Appeals directly to religion as an authority

rather than the coded “law of nature” cropped up more in the later twentieth century, but were scattered and still relatively uncommon.

Social Consequences of Legal Epistemology

In the case of legal treatment of women and intersex individuals in the nineteenth century, nearly every type of oppression as defined by Frye (1983) and Young (1990) are evident, interlocking together to protect the professional, personal, and economic interests of a specific group of men. As previously mentioned, oppression can take forms “embedded in unquestioned norms, habits, and symbols, in the assumptions underlying institutional rules and the collective consequences of following those rules” (Young, 1990, p. 41). Spade (2011), preferring the term “subjection,” writes that the term “oppression” implies that one group of people simply dominates another, not taking into account systemic issues; however, based on the widespread and focused reasoning in the legal discourse, “oppression” in Spade’s rendering seems appropriate. Intersex people are situated in such a way that depending on the decisions made about their sex, they may end up either oppressed or a member of the dominant group. This case in particular lays bare from another angle the absurdity of the justification behind sex differentiation, as a simple decision separates capacity from incapacity. Thus, intersex suffer from “powerlessness” in that they have no ability to make their own decision as to their sex. As for trans people, erasure or marginalization might be associated oppressions, although it could be argued that their absence from the legal literature keeps them out of the crosshairs of oppression and subjection during the nineteenth century.

Rather than naturalism (Grosz’s critical view of essentialism, not the empirical epistemology), as in the nineteenth century, essentialist biologism justifies the legal decisions, as it has a material origin, not necessarily moral or religious. Positivism,

especially in Comte's original rendering, would not accept a religious interpretation of the "law of nature," as faith is unobservable. The assignment of biologically-based personality characteristics are applied rationally through logic. Those essentialist views sweepingly assigned through logic lead to determinism, as Budd (2001) warns, which is a philosophical explanation for restrictions of free will where: "if and only if, given a specified way things are at a time, the way things go thereafter is fixed as a matter of natural law" and is supported by both experience and experiment (Hofer, 2010). The feminist version of determinism, which I adopt here, suggests that the condition of being born a woman leads to a determined path that cannot be altered. Essentialism is considered a metaphysical concept, but can be an unintended consequence of rationalist approaches such as positivism (although positivists would deny it).

As a result of the epistemic underpinnings of the ontological definitions of sex, women, particularly married women, find themselves systemically powerless and consequently vulnerable to exploitation and servitude, as their unpaid labor is used to support the economic and political endeavors of men. Women's unchangeable purpose and destiny is the care of the home and nurturing protector of children. She manages the household so the husband does not have to, and her economic interests are merged with those of her husband, rendering her utterly dependent. They are marginalized as prisoners of their definition, as it is used to keep them in thrall to the dominant sex "situated so that they must take orders and rarely have the right to give them" with "little opportunity to develop and exercise skills" (Young, 1990, p. 56). The exclusion from the professions bars their entry from holding office or practicing medicine, all while being exploited, as "the transfer of the results of the [paid or unpaid] labor of one social group to benefit

another” (Frye p. 49). The circular legal decisions restricting women’s rights specifically because they are already illegal constitutes a “systemic barrier” as defined by Frye (1983) as a restriction unrelated to “individual talent or merit, handicap or failure,” but rather “membership is some category” (p. 7). Thus, they constitute “a whole category of people is expelled from useful participation in social life” (Young, 1990, p. 53). All of these oppressions interlock to sustain women’s vulnerability, thus erasing them from public life.

For women, the 50s and 60s resulted in the same oppressions as above, but with the addition of “assimilation into the patriarchy” and a modified version of servitude. Assimilation into the patriarchy means changing behavior to fit with masculine norms, which can potentially cause resentment between women (Frye, 1983, pp. 8-9). Simply put, women “other” other women in order to gain the advantages of aligning with men. This seems to have sharply occurred in the legal profession, as women who had made it into the field distanced themselves from other women. One woman “was so intent on proving that I wasn’t like other women that it never occurred to me to fight back” (as cited in Bowman, 2009, p. 10). Additionally, the condition of servitude during these time periods changed slightly to encompass servitude at work in addition to servitude in the home. Women were steered toward low-prestige areas such as estate planning, probate, and tax law, which eliminated any chance of gaining partnership. A woman survey respondent in the 1950s warned, “Beware of the firm looking specifically for a woman lawyer. They want you for work they cannot get any man to do” (Morello, 1986, p. 206).

In differing degrees, pathologization of intersex people and women also occurred. According to Adler and Tennis (2013), pathologization occurs when “classifications serve as a sort of diagnosis and reproduce medicalized norms” (p. 269). For women, it

limits them in that biology was blamed for exclusion, resulting in determinism. The “law of nature” morphed from vaguely moral to entirely physical. For intersex people, pathologization initially had a positive impact because it removed the supernatural and monstrous connotations, providing some humanity; however, the transition from frightening freak of nature to medical curiosity still resulted in the shame and stigma of being considered abnormal and requiring correction or normalization.

For trans people, the initial omission from the nineteenth century legal discourse seems to indicate that nothing initially was perceived to be criminal about being trans, or possibly that it was so shameful it required silence. When they appeared in the discourse of the 50s, that uncertainty continued as laws and legislation attempted to stretch to include trans behavior (or surgical emendation) as criminal acts. As the laws formalized in the 1970s, the criminal aspects receded (but not harassment by law enforcement), but legal rights remained cloudy. The uncertain and unregulated environment could be manipulated to one’s advantage or could be frustratingly unreliable. For example, because clerks and other low-level, uninformed bureaucrats were handling issues such as driver’s licenses, they had much discretion and would amend the sex on drivers’ licenses if the applicants were persuasive enough to overcome the inconsistency in the application (Spade, 2008). Divorces and property disputes resulted in conflicting decisions based on medical knowledge mixed with judges’ personal feelings, society norms and moral concerns. Legal scholars noted the inconsistencies and often took a sympathetic tone. The plight of trans people rose in recognition and notoriety, subjecting them to both sympathy and derision.

Summary of Law

Law's epistemic trajectory varies little. Knowledge about women is developed positivistically and only ruptured when empirical approaches were taken to refute it. Hartsock (1990) argues that "the philosophical and historical creation of a devalued 'Other' was the necessary precondition for the creation of the transcendental rational subject" of the Enlightenment (p. 160). "'Others' such as women, [and intersex and trans people] were created in opposition to the rational speaking subject—to give "him" and systems that support his power legitimacy." She emphasizes that this does not speak to the natural unity of women, but rather the constructed "other" made up of "negative qualities" (p. 161). They were forced to unite strategically against the efforts to "other" them. The tradition Hartsock describes continued throughout the late nineteenth and mid-to-late twentieth century, as intuitively-conceived and logically-reinforced differentiated conceptions of sex. However, empirical and critical approaches increased with the introduction of women into the ontology of the legal profession and the rhetorical space of the discourse. Intersex and trans people were also considered violations of the law of nature, and thus othered with moralistic and heteronormative arguments that, like women, morphed into economic interests as marriage and divorce concerns arose.

Science/Medicine

"User Groups" and their Interests

User groups of the discourse include male physicians, the women striving to be physicians, and those women who became physicians, as well as patients. The discourse of medicine is less unified than that of law, as an inherent conflict exists in the goals and interests of scientific research. Basic scientific researchers conduct observational research in order to create knowledge of consistent "laws" that apply to the human body and the

physiology of how it works. Medical clinical work, on the other hand, focuses on the “abnormal,” seeking to identify the causes of the abnormality and “fix” them. The first uses observation to seek consistency, and the latter uses observation to seek abnormality. Also, similarly to the legal profession, another tangential, non-professional strand of informal discourse “defines” women, not in the context of being a clinical or research subject, but rather as a justification for first excluding women from the practice of medicine and then “othering” them once they had gained entry to the profession.

Women and men. In the nineteenth century discourse, the connection between body and mind was mostly absent in basic research discourse on sex and minimized in clinical gender research, likely because it could not easily be observed. Though science professes objectivity in its observations, in the discourse, men’s self-interest surfaces, for example, in the early hypothesis that conception only results from orgasm helped men evade accountability for rape or that only women were sterile (usually because of “corpulency” or “too frequent or promiscuous intercourse”) (Dean, 1866, pp. 16). However, in direct conflict with the actual work of medicine, the discourse around women not entering the profession focused on women’s constitutions. The assumptions about women’s constitutions methodologically were intuited through limited observation (through men’s observations of women) rather than strictly verified by giving women a chance to prove themselves. Once Freud’s works had been published near the turn of the century, the concept of gender entered the conversation and thus practice began to prioritize research and incorporation of the mind into the discourse of sex.

As in the legal reasoning, the same argument occurred through the three timeframes with slight modulations based on changing social norms. Also, similarly to law, the

rhetorical space of the discourse included repeated hostile utterances and a climate that signaled to women that they were unwelcome in the profession. In all timeframes, the abilities of women physicians continued to be debated in the medical discourse. However, in the 1970s, because women gained a voice in the profession, they were able to defend themselves, and gain a foothold in the discourse.

Intersex people. Reis (2005) points out that the nineteenth century professionalization of medicine transformed the condition of being intersexed from a monstrosity to a medical condition. The recognition that no perfect hermaphrodite could exist was accompanied by the growing expectation of “perfect (that is, conventional) male or female embodiment” in all humans (p. 423). What was believed to be “women’s qualities” were often articulated in the clinical observations of physicians attempting to identify the “true sex” of an intersex person. Additionally, the so-called feminine characteristics used to tip the balance one way or the other in intersex cases tended to be negative characteristics, such as that women were “irritable” and had “shrill, squeaking voices” (Taylor, 1873, p. 679). Again particular sets of elite men positioned themselves in contrast to the “others” by presenting feminine characteristics as negative and the “monstrosity” of intersex people. Once again, the discourse seems to be upholding a moral order based on compulsory heteronormativity.

Basic scientific research initially ignored or subsumed anomalies such as intersexed anatomy to their “laws.” Rather than accepting the variation of intersex, the clinical work sought to “fix” or force subjects to comply with fixing, especially as surgical technology advanced. Initially, the intersex discourse focused solely on physical markers, which in terms of gender knowledge creates the assumption that gender (and sex) do not extend

beyond the physical. Later on, as the mind became an ingredient, as gender and gender identity were conceptualized, the priorities of the physicians and psychologists in the John Money era seems to be finding the “optimal sex” of intersex people and “correcting” them to match the assigned sex physically and assigned gender behaviorally. In the 1950s the emphasis on heteronormative relationships receded as intersexuality was discovered earlier because of the cultural shift to hospital births. Intersex people’s gender less often was allowed to play out naturally without intervention.

Intersex clinical cases, or at least those that appear in the discourse, if they were not solely about “correcting” anomaly, often were often in the service of some legal concern; that is, the expertise of the physician was consulted in order to support a legal decision. However, the legal decisions in the late nineteenth century typically related back to some maintenance of societal morality, such as ensuring no same-sex “perversion” was occurring, or that the intersex person was able to perform heteronormative sexual activity and could reproduce (impotency was grounds for divorce). On the physical side, as technology advanced, the convenience of the surgeons influenced the decisions. Based on the available technology, it was easier to make vaginas than penises leading to a preponderance of medical decisions to “correct” intersex to women shows a pragmatic solution to the difficulty of creating a working penis. Additionally, the surgical corrections showed a goal toward having heteronormative sexual relations rather than the sexual gratification of the patient. For example, emphasis was on creating a vagina “capacious” enough for vaginal, heterosexual intercourse, even if no pleasure was derived from it.

Trans people. News of Christine Jorgenson's sex reassignment flooded clinics, and responses varied from annoyance to sympathy. Here the goals seems to be puzzling out the causes of transsexuality and treading lightly as not to be accused of committing violations of medical ethics. Psychologists, psychotherapists, endocrinologists and sexologists all weighed in to determine causes and the processes of gender identity, acknowledging John Money, the most prolific and influential voice of the time at this point, seemed to be motivated in part by fame and in part by the concern about his research subjects.

The same pragmatism, convenience and leaning toward heteronormativity in the considerations of intersex people also applied with trans people, but with a slightly different bent. If the goal was to find the "true" or "ideal" sex for intersex people, the priorities expressed in the psychological discourse seem to be a desire to find the underlying causes of this vexing anomaly, and to create rational "laws" for its origin so it could be corrected. No doubt existed in knowing the birth sex of the trans person, so the mystery revolved around what forces compelled them to want to change and whether that truly constituted change. Since the mind seemed to be more malleable or impressionable than the physical body—Benjamin (1954, p. 130) wrote that "castration produces a eunuch, not a woman"—the psychological reasoning led to blame parenting, particularly the mother's role, which, according to many psychologists, primarily caused the deviant behavior. Intersex cases manifested physically, so less attention was paid to the mind in those cases. Similarly to intersex patients, advancements in surgery and endocrine therapy led to more curiosity toward medical treatment; however, more medical ethics concerns and fear of legal reprisal impeded some from following through.

Medical Epistemology—Justification of the Ontological Decisions

Women and men. The clues in the medical discourse indicate that women, or at least those who attempt to enter the medical profession in the nineteenth century, have weak and squeamish temperaments, are nurturing and caring, and should not seek out situations that compromise their moral decency or reproductive abilities. Observable physical characteristics of sex include the external genitalia, along with such markers as beards and breasts, but also heterosexuality or “the desires excited by presence of either sex” (Dean, 1866, p. 20). Gender identity is not taken into account, since real emotions and feelings cannot be observed by an external viewer, nor are they valued prior to the development of psychology as a complementary discipline in gender cases. The psychological literature of the 1950s began to identify people as blank slates, but that gender roles were imprinted, either through the process of living in a gendered society, or artificially through the parents in the case of intersex children. The feminine qualities identified in psychological literature include nurturing, emotional, and maternal behaviors; tidiness and squeamishness; an interest in fashion; and an aversion to physical labor and vermin. These characteristics were posed in direct opposition to men’s characteristics, as if they existed on a continuum rather than co-existing.

As an applied science, medicine unquestionably relies on the observation and examination central to empiricism, as well as the rationalism of basic research of the natural sciences such as biology that supports clinical work. Basic research relies on “objective” sense data, unsullied by context or ideology, as well as infallible knowledge (facts) pieced together complex conceptualizations that lead to “general rules, principles, and ideas” (Hjørland, 1997, p. 69). The notion of empiricism developed with increase of

experimentalism in both medicine and psychology. However, in clinical practice, experience is valued over general principles, all conclusions are derived from experience, and experience is used to define concepts (Hjørland, 1997, p. 60). Foucault (2003) calls this phenomenon in medicine the “observing gaze,” which “will be fulfilled in its own truth and will access to the truth of things if it rests on them in silence, if everything keeps silent around what it sees” (p. 108). In other words, the type of empirical observation valued during that time presupposes a purity or objectivity of observation, which, without the noise of context, allows the “truth” to be seen. Foucault (1972) considered this part of the new “episteme” that began in the late eighteenth century, and called the knowledge generating observations the “medical gaze,” which could see what was beneath surfaces to determine truth beneath. He writes,

for prior to all knowledge, the source, the domain, and the boundaries of experience can be found in its dark presence. The gaze is passively linked to the primary passivity that dedicates it to the endless task of absorbing experience in its entirety, and of mastering it. (p. xiv)

Even though experience is also a tenet of phenomenology, this type of observed experience intends to match the abnormality to a presupposed condition that the observer has experienced before so that he or she can then identify a treatment plan for the abnormality to return them to “normal.”

A conflict, then, exists between the knowledge-creation that occurs in basic research (rationalism), and how it actually manifests in clinical practice (empiricism). Newton (2001) articulates the tension as “Rationalism is the search for and emphasis on basic mechanisms of disease, which then color all clinical decisions. Empiricism is defined as

the emphasis on the outcomes of individual patients and groups of patients” (p. 299). Budd (2001) points out the conflict of using induction in the service of deduction, but admits that it forms the basis of many areas of praxis (p. 50). Markie (2013) also notes that rationalism and empiricism are not mutually exclusive, and come in conflict only when they refer to the same subject. These discourses confirm that applying different epistemic methodologies deployed in the interest of different users can generate conflicting results. As shown in the legal discourse, a rationalist argument and an empirical argument for Lavinia Goodell’s bar application resulted in differing outcomes.

In medicine, the epistemological paradox occurs in the conflict between “normal” and “abnormal.” Basic scientific research uses observes and logically applies it to define what is “normal,” and clinical research observes what is “abnormal” and attempts to correct it. Because the condition of being a woman does not in itself constitute a disease or abnormality, the physical characteristics of women mostly were defined in the basic scientific research, taking the form of identification and function of female organs and systems in anatomy and physiology texts. The knowledge creation in basic scientific research undoubtedly takes a rationalist approach, with careful observation creating laws about anatomy and physiology, generalizing the knowledge to all cases of the phenomenon—like an ideal Platonic form—but with the recognition that it is based on careful observation, not metaphysics. Despite the rejection of metaphysics, rationalism allows for an immutable human core—human nature—which as Budd warns, can lead to determinism. Prior to the dominance of psychology and psychiatry, taking up the mantle of defining mental characteristics of sex was the pseudoscience of phrenology, strictly defining immutable characteristics passed down from mothers to children.

Though no clear physiological “cause” could be identified in the nineteenth century for sex difference other than organs (although it did not stop anyone from speculating), the same positivistic, intuitive “law of nature” was used as a professed epistemology to support the exclusion of women from medicine, where women deterministically were considered too weak to withstand unpleasant anatomical realities. For example, the intuited feminine characteristic of being nurturing was compatible with medicine, so they focused on squeamishness, and in one case, “that their physiological condition during a portion of every month disqualifies them...is too nearly self evident to require argument (as cited in Justin, 1978, p. 42). The discourse includes other moral reasons, such as the indecency of women physicians viewing men’s sexual organs and that their divided attention (because of reproductive/family concerns) makes them less competent. The delicacy of their constitutions included the scientific justification that spending too much energy studying would kill cells necessary for supporting healthy reproductive function (Clarke, 1873, p. 51).

This reliance on non-rigorous speculation infuriated the women already in the field. The women shot back with individual instances where women medical students had no change in countenance during potentially uncomfortable medical lectures. In response to the argument about menstruation, Dr. Mary Putnam Jacobi (1876) conducted an extensive study showing that menstrual cycles did not affect women’s work performance physiologically. In the introduction to her prize-winning study, she scathingly criticizes the lack of rigor and intentionality behind medical justifications of exclusion, writing, “the sex that is supposed to be limiting in nature is nearly always different from that of the person conducting the inquiry” (p. 2). Her multiple-methodological study refuted the

many essays that used the “law of nature” or menstruation as a cause for women to remain uneducated or excluded from the professions, citing them individually and refuting each point. Thus, she combines both standpoint and empirical epistemologies of knowledge-generation to combat the rationalist, intuited assumptions underlying the dominant reasoning. As Dr. Putnam’s research makes clear, since medicine relies on what can be seen, no consideration is taken either for the subjectivity of the object in self-definition. The authority of the physician is final because the opinion of the subject is suspect, as they may be attempting to commit something illegal or immoral (or inconvenient or threatening).

The social construction of sex and the addition of gender, as posited by Money starting in the 1950s, removed determinism based on visual sex organs but reinforced gendered stereotypes (e.g. girls like dolls and housework, boys like to wrestle). Accordingly, the discourse of women’s incompetence dropped the notion of physical incapability during menstruation or squeamishness and accepted the social notions that women had more family responsibilities. The discourse took into account the socially restraining circumstances, blaming the biological imperative of reproduction. Social structure is not implicated, nor is it suggested that it could be adjusted. The argument of women’s squeamish natures receded to be overtaken by the “divided attention” argument, which justified the diversion of women to low-prestige specialty areas in the field. The social attitudes echoed that in the legal field and referenced the inconvenience women caused men. For example, one woman physician in the 1970s recalled being told repeatedly that she should “stay home and take care of my children” (many times by many people), “we don’t need women in medical school because there aren’t enough

ladies' rooms," and "we can't have a woman on our board because then we wouldn't be able to smoke cigars, drink brandy, and tell jokes after dinner" (Atkinson, 2009, p. 1055).

The separation of sex and gender could be considered characteristic of critical realism, a post-positivist approach that prescribes that knowledge generation should still primarily focus on the observable, but allow for amendment and fallibility. It characterizes knowledge generation as moving toward "truth" in investigations of a mind-independent reality that can be studied by science. Critical realism allows for constructivism and the imperfection of observation in that observations and perceptions are inherently biased. It also "assumes that reality is composed of different levels (e.g. the biological, the psychological, the social, and the cultural level)" (Wikgren, 2005, p. 12). Thus, the introduction and recognition of the psychological and social realms into the study of sex (and the conception of gender as a whole) indicates this new approach, but with the "truth" more elusive than attainable. Evidence-based medicine, which originated during the 1970s timeframe, began the movement attempting less bias in medical evaluation and continual review of the state of knowledge of the field. The movement arose in response to what was considered unethical justifications of "interventions of dubious or unknown safety and efficacy, causing harm at both individual and population levels" (Ashcroft, 2004, para. 3). In other words, evidence-based medicine suggests the fallibility of knowledge in both research and clinical settings, and requires stronger justifications of knowledge claims by incorporating several perspectives. It seems to take a post-positivistic stance, where it recognizes the biases behind observations, includes the human, but still assumes a mind-independent reality.

Based on the outcome of John Money's John/Joan case, it seems like just the kind of case evidence-based medicine was created to counteract. The professed epistemology of the social construction of sex might, at first blush, be considered postmodern, but with historical lens, his enacted methods would be criticized by a post-positivist for being "theory-laden;" in other words, his observations were colored by the theory he was hoping to prove. Additionally, he used only one (falsely conceived) case and generalized it to all cases, and ultimately, he still subscribed to stereotyped gender roles that developed based on assigned sex. Thus, the same positivist approach persists.

Intersex people. The hallmark of intersex cases seems to be that the cognitive authority lies with the physician, but with little certainty about the decision. In the nineteenth century many physicians voiced their opinions on intersex cases, weighing in on other physicians' cases that they had never examined in person. Determining the "true sex" of intersex people in scientific discourse seems to be professed as "induction from collections of observational data," but perhaps not "intersubjectively controlled" (Hjørland, 2002, p. 262). Because of the inability of making a clear-cut sex classification, physicians struggled with setting a threshold to take the inductive leap. This uncertainty led to a new set of classifications such as the "female pseudohermaphrodite" that could cover sets of observed data that did not include gender identity. The epistemic values of determining "true sex" clearly does not follow a subjective realistic viewpoint during any of the timeframes, where the "subjects" would be considered the "cognitive authorities," thus create the definitions of themselves, rather than relying on some "objective reality" (Hjørland, 1997, p. 62). This continued through all timeframes. Young, et al. (1971), for instance, report that some parents required that a priest be consulted before agreeing to

surgery for an intersex infant (the priest would answer whatever the parents wanted) (p. 83). Once the technology had advanced enough to offer surgical “correction,” pragmatism asserted itself, as the convenience of the medical team more often took priority over the patients’ subjectivity or even parents’ wishes. Money, Hampson & Hampson (1957) recommend, “a great deal of emphasis should be placed on the morphology of the external genitals and the ease with which these organs can be surgically reconstructed to be consistent with the assigned sex” (p. 334). Also here the focus on “correction” and “normalizing,” and in John Money’s work, the condition of penis as the central determining factor, indicates more “othering.”

Trans people. Trans people caused perplexing ethical dilemmas for medical professionals. First, the “condition” was unobservable; no definitive physical evidence indicated when or why people wanted to change their sex. Thus, the visually-based empirical methods upon which they relied failed, and the authority had to be relinquished to both psychologists and to the patient themselves, both suspect choices. Some philosophical viewpoints reject psychology as a valid source of knowledge; whereas, psychologists see psychology’s cognitive faculties and processes as integral to belief-formation, perception, classification and behavior and can be considered an empirical methodology (Goldman, 1985, pp. 30-31). On top of it, surgeons and endocrinologists were expected to alter bodies that on the surface appeared healthy and be able to justify it to themselves and to others. The debate then, hinged on the ontological definition of what was “normal.” What needed to be fixed? Body, mind, or both? The focus on rehabilitation indicates a subordination of the person’s desires to a priority of maintaining

social norms. People desiring to change their sexes were considered mentally ill, and though they garnered some sympathy, the impulse was to make the problem disappear.

The parent-blaming for trans behavior pervasive in psychology constitutes a “constitutive social-constructivist” epistemology in that the psychologists came to believe that the social circumstances provided in the home by the needy, narcissistic mothers and cold fathers caused the conditions for the transsexuality to occur. This then socio-linguistically creates the need to change sex, a concept that has been created by society as a way of classifying. In other words, the condition of being transsexual was “created” by the parents and cultivated by the media fascination with Christine Jorgenson and by psychologists; it was not “discovered.” This stance, as articulated by Hacking (1999) argues that people “become aware of the way they are classified and act accordingly” (p. 32). Hacking sees it as a type of willful, interactive response to knowledge of the existence of a category. This viewpoint might explain the suspicion of transsexuality, as well as the belief that it is a “choice” that can be rehabilitated through aversion therapy. Even Benjamin (1954), who argued against rehabilitation, believed that some trans people’s behavior was psychosomatic. The discourse refers to the onslaught of men rushing to find treatment once Christine Jorgenson’s news came out, as well as the willingness of patients to shape their stories to meet the threshold for surgical intervention. Those few physicians who were more sympathetic, such as Harry Benjamin, may have taken a more psychology-friendly naturalistic approach. Naturalism is a type of social construction that allows for scientific study of social concerns such as human nature and culture (Mallon, 2013).

Summary of medical/scientific epistemology. Like law, medicine, particularly clinical medicine, has a pragmatic purpose and requires that knowledge creation can be traced back to its practical consequences. If the “fixing” of the abnormal (disease, malformation) constitutes the basis of the profession, then the abnormal can be viewed as a “problem” that can be addressed pragmatically. It can also explain the propensity to “solve” issues that are not actually physical problems but moral dilemmas. The pragmatic ends are preceded by the epistemology that determines what is a problem or not, what is abnormal and needs to be fixed. Women are artificially made abnormal through othering, while intersex people constitute a puzzle that needs to be fixed. Conversely, trans people are perplexing because their “problem” is not something easily observed; the physicians’ authority is undermined and they must trust in the subjectivity of the patient when no outward evidence can be observed, an uncomfortable position for trained empiricists.

Pragmatism, however, has been associated with reform, and a purist pragmatist would recognize that no transcendent definition of sex exists, but rather that it is defined in the service of solving a problem. William James, for example, saw pragmatism as a way of pluralistically reconciling morality with science and religion (Hookway, 2013). The “problem,” as exhibited through the users’ interests, initially seems to be how to maintain a moral order, both through steering intersex people toward heteronormativity as well as ensuring women stayed in their realms without violating moral decency. Therefore, it can be said that medicine takes a pragmatic stance in that it defines concepts in order to “help achieve certain goals and support some values, while at the same time counteract[ing] other goals and values (Hjørland, 2008).

Social Consequences of Medical Epistemology

The focus on fixing the abnormal and “problem-solving” leads to Foucault’s criticism (1995) of the normalizing or disciplining of docile bodies. Rather than militaristically training bodies for battle, Foucault’s context in *Discipline and Punishment*, women and intersex people in particular were subject to

a policy of coercions that act upon the body, a calculated manipulation of its elements, its gestures, its behaviour. The human body was entering a machinery of power that explores it, breaks it down and rearranges it. A ‘political anatomy,’ which was also a ‘mechanics of power’ was being born; it defined how one may have a hold over others’ bodies, not only so that they may do what one wishes, but so that they may operate as one wishes. (p. 136)

Feminists such as Bartky (1998) and Hochschild (1979) have argued similarly that this discipline forces women into gendered roles that restrict appearance and behaviors, amounting to what Hochschild calls “emotional labor” or Bartky identifies through bodily movement and bodily emendation. Though these behaviors are considered to be self-policing rather than violent, the overtly hostile rhetorical space for women physicians, for example, led to the consequent redirection either out of the field or to low-prestige specialties, similarly to women lawyers. The development of the concept of gender in the 1950s was helpful to women’s cases, showing that the social conditions, not birth, directed but did not dictate one’s circumstances, but resulted only in a realignment of the argument. The “law of nature” was undermined with this development, yet it was evoked in a modified version to continue to force women into a double bind. Women who strayed from standard feminine ideals by attempting to enter the workforce, have a same-sex lover, or enjoy sexual intercourse were all considered abnormal.

The goal of exclusion for the sake of moral decency and biological imperatives removes women's agency and leads to determinism. The constant questioning of competence erodes women's confidence and also leads to assimilation into the patriarchy, where women try to behave more like men or avoid having children to pre-empt the argument. This results in the oppressive circumstance of cultural imperialism, where "the dominant [here read 'gender and sex-conforming or heteronormative'] meanings of a society render the particular perspective of one's own group invisible at the same time as they stereotype one's group and mark it out as the Other" (Young, 1990, p. 59).

Once again, the medical attention paid to intersex people succeeds in both humanizing and pathologizing them. It freed them from the animalistic and "monstrous" connotations, yet, it made sex and gender a medical problem rather than just a variant of presentation. For intersex people, this disciplining was similarly restricted to discourse and rhetorical space until medical technology allowed the disciplining to become surgical correction and thus transformed into one of violence (or "reverted" may be a better term, considering historical treatment of intersex people). To be sure, some intersex conditions can be life-threatening, but the pathologization resulted in the rhetorical space being hijacked by the observer over the observed. Additionally, some physicians implied that not removing extraneous testes and the like would lead to cancer, though no evidence of this existed (Benjamin, 1969, p. 138). A consequence of the reliance on the observable is that intersex and trans people are silenced on the topic of their own genders. As an example from the 1970s, John Money's subject David Reimer, the boy who lost his penis in an accident, underwent a multitude of surgeries and treatments to "correct" him into a girl because Money believed he could never live with the burden of being without a penis.

Money disregarded Reimer's subjectivity, molding his answers to fit his hypotheses. Reimer suffered his whole life, and he ultimately committed suicide. Contrast him with the rural South Carolina man born with no penis, who absent of the anxiety of doctors, lived his life as he was with no psychological or sexual trauma.

The psychological pathologizing of trans people corresponded with the emergence of the legal conviction that trans behavior was something immoral and potentially judicable. That rehabilitation was predicated on bad parenting or other external factors such as eating too much sugar, brushing teeth or wearing warm clothing on warm days (Brady, 1944, p. A7) indicated that it was a choice and preventable, which leads to shame and self-loathing. The notion of neutrality-at-birth also reinforced this. The hope that arrived in the form of Christine Jorgenson was counteracted by the realities of the denied authority in their rhetorical space. Another considerable consequence of reliance on the observable is that trans and intersex people are subjected to invasive inspection and discussion of their anatomy and sexual practices (as objects, not subjects) in order for others "authorities" to decide their sex or gender. In medicine this involved in illustration or photography of genitalia and other body parts featured prominently in the medical literature. In legal cases this arrives in very public forums where the details of a person's body and behavior are described in courtrooms, case law, exhibits, and textbooks. This public and humiliating justification reinforces the assumption that sex and gender are about the organs not the head, (you cannot see what gender someone feels).

Summary

Though both nineteenth century legal and medical discourse communities approach sex from different epistemic angles—the epistemologies of positivism and a specious

pragmatism in the case of law and a somewhat pragmatic empiricism along with elements of positivism in the case of medicine—they arrive at the same outcome: a reference to the “law of nature” with the twin goals of excluding women from the professions and generally upholding moral decency and sex roles. The definition of gender characteristics do not seem to reference at all the subjectivity of patients or clients, but rather the ostensible impact on the enunciating men, indicating a belief in the innate gentleness and delicacy of women, that intersex have a concealed “true sex,” or that men might possibly not want to be men. Neither discourse, for example, seems to express that women are incapable of practicing law or medicine, but rather that their natures are better suited for other vocations, namely, childrearing. Both indicate first that the exclusion is meant for her own protection, as her gentle nature would be incapable of handling such responsibility and unpleasantness as encountered in either field, and later that families will suffer if the mother works. Despite this, it seems that men’s difficulty with facing a woman attorney, discussing anatomy with a woman doctor, refraining from telling dirty jokes at board meetings would be too much for the men to bear (i.e. they are the delicate ones) and it would be a burden for men to change their own behavior. The discourse that evaluates women physicians’ and attorneys’ performances, at first focuses on physical difference, but then shifts to a more standpoint position as women join the discourse and are able to include their dual perspectives as women and professionals. This shifted the “way of knowing” from the (male) empirical or positivist observer of women to the perspective of the knowing subject. In the case of intersex people and trans people, curiosity and the discomfort with uncertainty seems to drive the intentions, but under the

guise of protecting heteronormativity and moral decency. Turning to the *DDC*, are the epistemic values professed and enacted in science and law similar to those in the *DDC*?

Dewey Decimal Classification

User Groups and Priorities

The professed epistemology of the first edition of the *DDC* appears in the introductory matter, whereas the enacted epistemology appears in the classification itself. By his own admission and reinforced through the lore of the field, Dewey's epiphany of the decimal system occurred in a church, but no mention of divine inspiration occurs in the classification discourse. Dewey's initial disassociation with his knowledge scheme, along with his frequent disclaimers of imperfection, contrasts with the tone of the physicians, attorneys and phrenologists who claim final authority on subjects they may not have even viewed in person. Highly conscious of his users, Dewey repeatedly references not only librarians and library users, but also businessmen, schoolchildren, scientists and everyone in between as his target interest groups. He professes that efficiency for his users is his goal, and the first edition seems to be a tentative test run, given the anonymous publication and his reluctance to take credit. However, his copyright of the system betrays his intention as a commercial endeavor. Regardless, he takes a humble tone intent on building credibility. Thus, his professed interest seems to be pragmatic: solving organization and retrieval problems for both libraries and their patrons.

Structurally and in content, Dewey's system seems to unconsciously or consciously reflect his experience as a white male in an all-male, Christian college, and indeed, he based it on the Amherst College Library collection. Women do not appear in their own right, but rather as low-status, domestic subjects, allied with veterinary

medicine or in relation to institutions from which they are excluded. Though men also do not have a category of their own, because the “generic” terms pose women as exceptions (e.g. education—women), the assumption is that those “generic” terms imply a male norm (i.e. “education” means “men’s education”). Similarly, such clues, such as that no category for “fathers” exists under “families” reinforces the divisions between the public and domestic spheres. Dewey resists the “monstrosity” labels for intersex people, directing users to class the condition in physiology, which, though despite not having their own class, seems appropriate, or at least more appropriate than it would become in later years. Similarly as in the medical and legal discourse, trans people do not exist. Dewey does not comment specifically on women’s or intersex people’s places in the classification, but in practice, similarly to the legal and scientific fields, it serves to reflect and reinforce the social norms of the time.

However, with the incorporation of nine years of external feedback and work and life experience for Dewey, the 1885 edition, while still professing efficiency as his main goal, becomes more detailed and insulting toward women and intersex people. Dewey’s confidence had grown from his student days and came to echo the authoritative tone of the medical and legal professionals. Consequently, despite his professed willingness to hear feedback, his defensiveness positions him as the highest authority and keeps him in control of his system. Thus, similarly to the legal profession, it seems to be economic concerns that underlie Dewey’s interests, as he began the protectionism of the system that has continued throughout the history of the system to the present day.

In the eighty years between the second and seventeenth editions, other editors, including women, were appointed and Dewey died. Miksa (1998) credits Benjamin

Custer, the editor of both the seventeenth and nineteenth editions with “almost single-handedly” modernizing the *DDC* by keeping it “up-to-date in its terminology and subject collocation, and the increasing use of subject faceting and notational synthesis” (p. 80). Custer also advocated for the “integrity of the subject,” a position that attempts to bring “theoretical accuracy” back to the *DDC*, rather than merely “convenience.” What this “theoretical accuracy” did is correct some undeniable ontological mistakes (i.e. classifying women as a “type of” custom, costume or folklore). Dewey’s 1885 structure was expunged and updated versions of sex and gender classes appeared and were nearly immediately revised. Custer apparently took “keeping up with the pace of knowledge” seriously with the swift revision of gender in the nineteenth edition, which corresponded to the burst of discourse emanating from medicine and psychology.

Epistemology

Women and men. If male attorneys and physicians formulated their epistemic methodology with the overt intention of excluding and othering women away from their workplaces and keeping them in their homes, what benefit would this be to bibliographic classification? Is another form of “othering,” worth the retrieval problems it causes? In other words, how would excluding women or hiding women on the library shelves benefit him? How conscious was Dewey of his own complicity in the consequences to the artificiality of his system? He undoubtedly understood his system was artificial—his pragmatism revealed that. The treatment of women, intersex and trans people seems to be similar as appears in the legal and medical discourses, but arrived at through different epistemic approaches.

Dewey (1876) clearly reveals his purpose for his classification by stating, “practical usefulness has been esteemed the most important thing. The effort has been to

put each book under the subject to the student of which it would be most useful” (p. 6). This echoes pragmatist John Dewey’s (1920) views on classification: “Convenience, economy and efficiency are the bases of classification, but these things are not restricted to verbal communication with others nor to inner consciousness; they concern objective action. They must take effect in the world” (p. 154). This certainly at least professes a pragmatic epistemology to the classification. The problems Melvil Dewey seeks to solve are obviously similar: the efficient retrieval of information, with some sacrifice of theoretical purity. Also echoing the pragmatists, Melvil Dewey (1885) recognized from the start how perspective affects classification, as he wrote in the introduction to his second edition of the *DDC*:

The greatest objection to a class catalog has ever been the impossibility of knowing just where to put a book in cataloging, and just where to look for it when it is again wanted. Different librarians, or the same librarian at different times, class the same or similar books in widely different places. Where one man did all the work and held his place for a long series of years, there was a certain degree of uniformity; but even then there was the danger of looking at the same book from different standpoints, thus causing confusion. This danger will be understood by any one who has ever attempted classification, and is not at all surprising when one considers how differently competent authorities often class the same subject. (1885, p. 33)

Just as a human group as a classified subject can be misplaced or defined strangely, as Dewey notes, depending on the subject or cataloger, it is easy to see how similarly-situated people can have totally legal different outcomes or status depending on

jurisdiction, interpretation or application of existing law. He recognizes that despite the need to have consistent shelving, that nothing is constant, but rather defined by context or goals. John Dewey (1920), too, writes “Cherry trees will be differently grouped by woodworkers, orchardists, artists, scientists and merry-makers...Each classification may be equally sound when the difference of ends is borne in mind” (p. 153). Foucault (2003) attributes differing outcomes based on perspective to the existence of differing epistemes validating knowledge claims.

The *DDC* follows Western, Aristotelian logical structures, which to some degree necessitates a rationalist approach in the formation of mutually-exclusive categories. As Hjørland (2004) puts it, “rationalism looks at our concepts as inborn structures, which match and classify our perceptions” (p. 135). In other words, in the structural warrant operating in the *DDC*, a cataloger finds a matching class for a work rather than creating a theoretically- or contextually- appropriate class on the fly. However, even a logically-formed structure has some flexibility in how it shows relationships and, in the case of the bibliographic classifications that it can be and is regularly revised. In the introductory matter, Dewey professes a marginally critical approach toward his system, at least more so than the legal and medical discourses were of themselves. Dewey based his structure on warrant in combination with his lived experience as a librarian. He recognizes the consequences of his classification on the users (a select group of users, anyway). The recognition of the authoritative, intentional and cognitive aspects are all at least professed to some degree, but ultimate get sacrificed to the pragmatic goal of efficiency and the rationalist requirement that values “conceptual clarity and evidence and which prefers deductive methods rather than inductive methods” (Hjørland, 2004, p. 135). That Dewey

was able to recognize the imperfections and perspectivism involved in classification shows that he recognizes the fallibility of his structure. However, the recognition of imperfection does not extend to a critique of the knowledge being classified.

Though Dewey was critical of his methodology of building structure, the outcomes do not mesh with his writings about women in the field of librarianship. He at least recognized the circumstantial rather than physical nature of women's status. Language resembling the legal and medical discourse can be found in Dewey's writings, but with a more thoughtful eye. He (1886) wrote,

Women have usually poorer health and as a result lose more time from illness and are more crippled by physical weakness when on duty. The difficulty is most common to women, as are bright ribbons and thin shoes and long hair, but it is a question of health, not sex.

Though he takes the same argument the others took in the 50s through the 70s, he goes on to make an admission the other discourses are not willing to make: "this is a fault of circumstance, not necessarily of sex" and "A strong, healthy woman is worth more than a feeble man for the same reason that a strong man gets more than a weak woman" (p. 20). Thus, he acknowledges the role of societal norms and approaches it with an open mind, which evidences a phenomenological approach, where he "brackets" his assumptions, but it also could be that Dewey at that point was actually exposed to women; he "experienced" them performing work within his field and thus his perceptions were colored by experience rather than assumptions.

Before giving Dewey too much credit, the outcomes should be examined as well the methods. In law and medicine, women are posed as having innate and immutable

characteristics opposite of men's. In the first edition of *DDC*, this manifests as the "othering" and exclusion of women. If authority determines about which subjects we can speak and what subjects are erased in formal discourse, the inclusions and erasures are manifested in the rhetorical space of a classification. Despite what is professed above, women are represented in the classification in only limited aspects; anyone looking for other aspects are inconvenienced. According to Code (2005), the transformation from subject to object reduces women to a collection of observable traits (p. 44). If women are perceived by the "enunciative modality," in this case Dewey, to be absent from intellectual life, then absence becomes the observable feature and therefore how they are defined. The choice of characteristics implies that the conditions matter to the results, or as Olson indicated, to reflect the goal of the classification system. Ontologically, women, men, transgender, and intersex people "existed" in all timeframes, so their very existence cannot be denied. Clearly, Dewey knew at least that women and intersex people existed, and WorldCat records show that literary warrant existed for topic inclusion in his classification. Omission from his first edition of the *DDC* separates them from the intellectual sphere of knowledge, thus creating a deterministic epistemology which the condition of being woman dictates domesticity, motherhood and exclusion from institutions. Without presence in the system as a non-maternal, non-domestic, included population, women who seek answers from that space cannot find it.

Though Dewey's approach echoes the legal and medical approaches, what differentiates Dewey is his recognition of its fallibility and how it impacts the structures he puts in place. This places Dewey in the professed camp of critical realism in that he shows a "concern with causality and the identification of causal mechanism in social

phenomena” (Wikgren, 2005, p. 15). In other words, unlike the positivist legal field where conditions are accepted for what the “are” because they are observed that way, or unlike medicine’s “purely objective” empiricism, he accepts that his scheme is an artificial, discipline-based structure meant for information retrieval—disciplines that are socially formed. Critical realism assumes that a mind-independent reality exists, and in knowledge organization, that “reality” could be considered the collections that create the warrant for which knowledge organization systems exist. Dewey’s awareness of the problems of his system, however, do not make him particularly worried about the results on the users. Budd, Hill, and Shannon (2010) describe Bhaskar’s view of critical realism in tandem with Husserl’s phenomenological approach as foundations for LIS methods. Husserl’s phenomenological approach is about knowledge and thus relates best to knowledge organization (Budd, 2005, p. 47). Bhaskar’s approach is described as “epistemological fallibilism,” and includes “intransitive objects” or unchanging things that exist in a mind-independent reality, as well as “transitive objects,” which rely on an historical and compounding view of scientific knowledge—things that are defined as we know them at a specific point in time (p. 272). Dewey’s recognition of the fallibility of his definitions is evidenced by his willingness to take feedback and his frequent professions of the imperfection of his scheme (transitive objects). His ontological justification comes in the form of literary warrant (intransitive objects). However, though Dewey gets out in front of his explanations, he still is influenced by the very social structures he recognizes (e.g. that women are not “naturally” inferior to men), which limits but does not fully erase the “critical” aspect of his critical realism, or speaking in terms of phenomenology, his critical assessment of intention.

Nearly an entire generation passed before the next change to gender classification in the *DDC*. During that time, the conceptualizations of sex and sexuality had undergone seemingly transformative ontological (classification) changes based on ontological (philosophical) developments in psychology, psychiatry, and the newly-minted field of sexology. Gender was beginning to be recognized, along with social contributions to women's position and treatment. Benjamin Custer shifted the professed epistemology from a purely pragmatic and utilitarian approach to one that attempts to "reflect reality" more accurately, both ontologically (e.g. better representation of whole/part relationships) and also with the recognition of the fallibility of knowledge. The "sacrifices to accuracy for the sake of economy" disappeared in a maze of arcane instructions intended to restore the "integrity" of the subject.

When attempting to restore accuracy, Custer's team posed gender and sex as "social problems" and the rhetorical space related mostly to sexuality. Does this constitute Custer recognizing the subject "at a point in time, in a place, within a social context, in a psychological state" (Budd, 2005, p. 45)? Even if Dewey or Custer take a more critical approach, the results still tend to replicate social norms because that reflects the experience at that particular point in time from an observer rather than a knowing subject. Custer's "drip principle," while professing to reflect reality, results in the (maybe) unintended consequence of providing no disclaimer for difficult-to-classify concepts such as intersex or trans people. In other words, in previous editions their placement as disorders or deviances could be attributed to convenience rather than accuracy. Here, the "integrity of the subject" principle implies a belief in the accuracy of the hierarchical force. This seems to justify the use of the gender classification as the means to

questionable ends, which reveals a flaw in pragmatic thinking. In practice, the actual classification scheme reveals a somewhat different story than both Dewey and Custer tell. Both the introductory matter and the classification reveal pragmatic ends, no doubt there. However, the end or result is manifested in the actual classification, where women are erased (omission from the 1876 edition), ghettoized into the domestic sphere (1885 edition), and pathologized, sexualized, and problematized (1965 edition).

Intersex people. Dewey clearly had experience working with women, at least once his professional career began. His experience with intersex people seems to be limited to literary warrant, an empirical approach which can be considered positivistic in that it lumps hermaphroditism as a type of physiology, considering it a condition rather than a social group. With input from “experts” in the second edition and perhaps finally picking up on tone in the literature, intersex people suddenly became people and were allied with other “abnormalities,” **Dwarves and monstrosities**. By 1965, the intersex condition became pathologized, likely influenced again by warrant, but inaccurately so by being lost without a place in hermaphroditic reproduction, which has nothing to do with humans and amounted to being erased entirely. Finally, in 1971, with a surge in literature, it gained its own class, but as a problem or disorder, as reflected in the titles. The literature generally included scientific or medical titles, referring to both animals and humans, and thus, with language that include “freaks,” and “abnormal,” the *DDC* ontologically follows suit, classifying it as a sexual disorder. Intersexuality as a sexual disorder is once again contingent on the definition of normal, and the authorities doing the defining are decidedly observers rather than knowing subjects. Intersex people changed from a variant to a deviant presentation of anatomy. The frequent changes, (it

had changed positions in every edition from the fifteenth to the nineteenth) indicate utter uncertainty of how to classify it, or at least the indecision reflected in the literature.

Trans people. Trans people do not appear in the *DDC* until the 1965 edition, and only under the term “transvestism.” The omission from the first two editions result from warrant, so they can be considered empirically omitted. The appearance in the seventeenth edition as an “other” sexual deviance reflects the speculation in the psychological discourse of the time and uncertainty of how to classify it. Between 1965 and 1971 it (meaning the inaccurate “transvestism”) morphed from a medical concern (disorder) to a moral issue (deviation). The repositioning from a moral angle indicates a shift in authority from medical to religious or another version of what Hjørland (2008, n.p.) calls “authoritarianism.”

Social consequences

Women. Since the *DDC* is a bibliographic entity, the social consequences are pulled both from Young (1990) and Frye’s (1983) types of oppression as well as from the types of oppression in knowledge organization described in the first chapter. Unlike medical and legal fields of this timeframe, Dewey never sought to exclude women entirely from the profession and acknowledged the role of social circumstances in women’s position. Thus, his discussion of women in the field does not reflect the same overt oppressions as the other fields’; however, his enacted interest in having women in the field as cheap labor does represent exploitation. The focus here though is on the classification discourse, and here, despite his epistemology enacted in his classification scheme resulted in an overriding impression of exceptionalism, or a way of “othering,” which, like the other discourses, echoed and reinforced the social beliefs.

The trick of classification is to ensure that the relationships are not forced, artificial or illegitimate—that conceptual violence is not committed is a more recent concern. The absence of a general category for women in the 1876 *DDC* communicates that women constitute a “minor” or unimportant topic, not worthy of inclusion, as Dewey called subjects that were omitted. Though it still results in oppression, it seems to result from omission rather than erasure, which carries more intentionality. In *DDC*, the rhetorical space around the subject of women demonstrates how naming and proximity can affect perceptions of the concept. If a classificatory space is imagined as a room, the assumption follows that those sitting around the table in the room have something in common with each other because of hierarchical force. In most cases, it works, but women present a challenge because of the absence at creation of the system; women was added as an afterthought.

Women were only taken seriously in maternal and reproductive capacities and were otherwise treated as exceptions to the male norm (Olson & Schlegl, 2001). The few feminine topics that can be found in the 1876 classification scheme also are rhetorically situated in such a way that devalues women. The denizens of this rhetorical space include nuns, a housewife, a midwife, two pregnant women and a mother with an absentee husband, all of whom are uneducated and none of whom can vote. This fully represents neither the women of the time, nor the literature upon which the classification is ostensibly based. However, it might represent what is visible to Dewey at the time. Code (2005) would object to the singular identities assigned because she rightly believes that individuals are too complex to essentialize, but in the case of a classification, where categorization is unavoidable, she would argue that responsibility is to get to know the

characteristics of and gain empathy for the group. The group would be identified more specifically, and what would result is a roomful of women with more diverse credentials than just reference to reproductive roles and servitude toward a male public sphere. Their traits are essentialized and pathologized through such categories as “roles of husbands and wives,” mental characteristics of the sexes,” which leads to determinism.

The ghettoization that occurs in 1885 is doubly insulting, considering that Dewey either felt there was no other option than to place women in a leftover category or that he did not believe people would notice. Foucault (1970) argues that the traits chosen to define a set “privilege the visible” by choosing “visible, simultaneous, concomitant variables, without any internal relation of subordination or organization” (p. 136), and this relates to how women appeared in the rhetorical space of the classification. Browsing the shelves would associate women with embalment and suicide, social customs and etiquette. Once women and men emerged as social groups rather than a type of custom, costume of folklore or a generic norm in the 1965 edition, they were now considered a “social problem,” and likely because of the sexual revolution, the problem was sexual rather than related to social status. But by the 70s, the sexuality was drained from the class to be replaced with demographic traits.

The constant movement of hermaphrodites, the changes in meaning and the haphazard sliding back and forth between zoological and human context all reflect uncertainty of the origins and the need for some subjectivity. Oddly enough, the first edition where Dewey classed it in physiology seems to be the least insulting or inaccurate of all the classes, even though they had no class of their own. As Olson (2001) points out, Dewey was concerned about “confuzion” (p. 647), and though he is referring to the

problem of perspectivism, the instability of the placement of the concept results in it being confused and consequently hidden or undiscoverable.

For trans people at minimum omission or potentially erasure occurs; however, at this point in time, they are not necessarily viewed as pathological or breaking any laws so they are perhaps thankfully omitted from the legal and medical discourse. Initially, a very small amount of literature exists on trans people, making it feasible that warrant dictates their exclusion from the first two editions of the *DDC*. Although the term “transsexual” called up around 600 results in WorldCat during the 70s, still the vocabulary remained “transvestism,” which constitutes erasure. The erasure might have been an attempt to wait out the confusion, but it also could have stemmed from misunderstanding the phenomenon. Transvestism, then, standing in for transsexuality, was pathologized first as a disorder and then a deviance.

Discussion: Implications to Knowledge Organization

Though the legal and medical discourses never clearly articulate what could be considered a “formal” classification of gender—partly because it is so difficult—the repeated language and epistemic reasoning methods used to draw conclusions about these groups results in “formal informal” classification used and reinforced within and between those professions. The institutional or professional weight behind this discourse differentiates it from casual social perceptions of gender experienced by individual actors. In other words, the characteristics of women, intersex and trans people described in the legal and medical discourses represent institutionally-backed definitions, which lends them authority, even if it did not represent the views of all men or even all men within the profession. The ontological characteristics are informally agreed upon and reiterated

within the texts and utterances within and between disciplines. The legal profession relies on the medical as a knowledge source, and the medical draws from the legal the notion of the administrative and moral aspects of maintaining gender binaries. Medical classification can deny people subjectivity, but physicians need to be able to serve all patients. Legal discourse has the most opportunity to erase by not recognizing rights and by actively resisting participation in the discourse. Bibliographic classificationists and classifiers have the most difficulty fighting the ontological existence of women, intersex or trans people, as the works have to go somewhere on a shelf, but ignoring problems, working around them, or attributing them to “imperfection” can provide cover.

Though the discursive analysis reveals little new or surprising information about the manner in which women, trans, and intersex people were discussed by observers in three historical periods, it does reveal three important points about epistemology and classification. First, differing knowledge-generation methods can contribute to both the reification and undoing of institutional discourse and knowledge. The constant repetition of knowledge claims creates a semblance of truth for a particular domain. Second, bibliographic classification replicates those epistemic values expressed in the discourse. Finally, as with other philosophical ideals, professed epistemology may look quite different from what is practiced in reality, and can be self-serving.

The epistemic methods used in the discourses allowed for limited perspectives on gender to be intuited and applied widely through positivist methods, which led to the exclusion of women from both professions, rendering them impotent and dependent on men for access. Although positivism has been condemned in philosophical and scientific circles for many years, as a method of knowledge-generation it has been hard to shake. In

fact, many LIS researchers identify it as the dominant epistemic viewpoint in the field. Budd (2001) summarizes several researchers including Harris, Radford, and Dick, who generally argue that the dominance of methodological positivism in the field can be attributed to a desire to give the perception that LIS is a valid “science” (pp. 14-15). Similarly, the positivism used in the legal discourse attempted to appear “scientific” with its concomitant authoritative weight.

The medical discourse unsurprisingly used both positivism and empiricism when generating knowledge about sex and gender. Intersex people confounded any attempt to make generalizations about sex, and in many ways they interacted with each other to support desired hypotheses. Hjørland (2004) sees the two as closely related, and summarizes the recent climate specifically in knowledge organization:

Today the great divide is not so much between empiricism and rationalism. Now these traditions seem much more alike in their faith in neutral observations and deductions. They are opposed to traditions like hermeneutics, historicism, pragmatism and postmodernism, which emphasise the cultural influence, interests and theory-laden nature of knowledge. At the beginning of the twenty-first century not many theorists defend positivism any longer, which does not imply, however, that the positivist way of thinking is not still influential as a kind of naive or silent philosophy (positivism has been termed the “invisible philosophy of science”). (p. 133)

Hjørland believes positivism still reigns because “no alternatives have yet been able to establish a strong position in the practical guidance of research processes” and because of a “considerable lack of clear terminology in the philosophy of science” (p. 133). In fact,

the very notion of bibliographic control directly opposes the notion of subjectivity, employing similar absolutism to smooth over inconvenient exceptions.

Knowledge organization researchers are well aware of the conflict between the subjective and the need for decisive categories. In the past ten years since Hjørland wrote the words above, a multitude of knowledge organization researchers have offered up options for epistemic approaches, most of which fall into a form of pluralism, recognizing the ontological “reality” behind literary warrant, but also taking a more critical perspective to avoid the conceptual violence such as that reviewed in this study. Viewpoints such as critical realism, integrative levels, domain analysis, phenomenology experiential realist or feminist approaches all attempt to balance recognizing individual perspective and concept stability for the purpose of classification. For example, Hjørland has recommended domain analysis to restrict the KOS’s to the knowledge of a particular discipline, Feinberg (2007) has recommended simply owning up to bias, and researchers such as Gnoli & Poli (2004) and Szostak (2003) have attempted to construct or recommend phenomenon-centered classifications ostensibly flexible enough to be both universalist and perspectivist. Social tagging has been coupled with more controlled systems to accommodate other subjectivities, but none of these seem to provide a satisfactory solution. The *DDC* has recently attempted to increase subjectivity by increasing and simplifying feedback mechanisms (discussed below), but they seem to be perfunctory and do not command enough response to constitute a “voice.” Knowledge organization research has also shown that positivism is very hard to avoid, as much as other approaches are recommended.

The analysis also exposed the influence subjectivity plays in controlling the discourse and the recognition why control of the discourse was defended so fiercely. The medical and legal discourses from the start “other” women through either pragmatic, positivistic, or logical positivistic approaches, based on intuitive and deductively applied knowledge and continue to do so through all three timeframes, albeit with slightly modulated justifications. Women simply did not exist for Dewey until consultation with “hundreds of experts” indicated they were missing. Similarly, transexuality as a concept never made it into the *DDC* despite an explosion in research and literature. The recognition of women’s rights, for example, follow a gradient that echoes the amount of subjectivity allowed women in the discourse.

Controlling the discourse manifests in political power, and the more authority women had in the discourse, the more access and germs of power they had, although still mostly nascent by 1979. Intersex and trans people still existed underground as an “other,” and recognition of rights had not reached the employment realm. In the *DDC*, they never reached the status of a social group, but instead were still defined in the negative. Trans and intersex people are othered as well, in part through shaming them for difference and in part to correct their anomalous existence so that they fit into the binary social norms of each timeframe. The knowing subject is more present, but not necessarily valued, which led to further entrenchment in views.

Given the frequent references to “the law of nature,” the practitioners took a problematic, deterministic approach meant to safeguards their power positions from change. The reasoning, in practice, is justified by social norms (i.e. that women must reproduce and serve as caretakers), but professed to be justified by invoking the law of

nature, which suggests a higher, universal moral or scientific power (i.e. going outside the domestic sphere is a violation of fate, immoral, or will causes wrongs). When social norms and knowledge of the enunciative modalities do not match the subjectivity of the knowing subjects, such as here, it leads to an epistemological echo chamber.

The slight changes in subjectivity follow Longino's (1990) idea that science (this applies to law and bibliographic classification as well) requires social interaction with more diverse communities in order to recognize their own situatedness. This ostensibly widens the notion of "experience" aiming to reduce underdetermined hypotheses that without that added perspective result in the subjective preferences of the observer to dominate. Thus knowledge, while still normative, encompasses a wider range of perspectives. *DDC* included women's perspectives far earlier and "welcomed" them more readily than the legal or medical discourses. A difference between *DDC* and the medical and legal discourses is that a feedback mechanism existed, thus showing a more critical side as well as a recognition of fallibility, despite the thin-skinned and prickliness of the responses.

If the medical and legal discourses partially set the agenda for knowledge-creation, the *DDC* holds up a mirror to that agenda, reflecting the coherence or incoherence of the conceptualizations in the professions and society. Obviously the medical and legal discourses are not the only discourses at play, but they have outsized influence because of the power they wield in directing how people can or cannot publicly live their lives, and their official discourse gets entered into the ontological pool for literary warrant. The Foucauldian method reveals the disorder that follows when society's views are divided or confused because of ignorance, inexperience, or indifference, or when some interest has

been established, such as medical research streams or litigation. The changing definition of intersex people from frightening and supernaturally-derived monstrosities to immoral deceivers to biological curiosities, to ungendered *tabula rasas* is reflected in the bouncing around the *DDC*. The concept of trans, though surely extant through history, only legitimized as sex research grew and focused attention on it, but again it was pathologized and demonized. The changes to gender classification in the *DDC* mirror the changes in the discourse, but most glaringly reflects the scramble to find an appropriate classes for all three human types resembles the same fumbling occurring in research as it interplays with societal beliefs. “Keeping pace with knowledge” too closely results in the unintended consequence of turmoil in the bibliographic classification when the pace of knowledge was in flux.

The discursive analysis also revealed some of the limits of theory. Epistemic approaches as described in philosophy of science or legal theory texts merely describe and argue the ideal methods and values emphasized in knowledge generation. Despite the many epistemic movements occurring simultaneously in legal theory and the philosophy of science, those refer mostly to individualistic ideals that describe how approaches to knowledge generation *should* be taken in a lab or research setting, but not how they actually spill over into active knowledge-generation. Legal systems expect that citizens will obey laws because of moral obligation, and though the legislatures may have believed in the higher power by which they abided, the fact that resistance existed (e.g. women attempting to vote, attending law school, wanting to work and be educated; dissenting legal opinions) allows that it was not universally accepted and someone deemed it immoral. All three discourses in all three timeframes, for example, either

profess or enact a pragmatic intention; however, the intentionality does not always come from a critical or good-faith place and does not represent the ideal pragmatic stance as articulated by theorists.

Thus, an element missing from discussions of epistemology in knowledge organization is the role of emotion and self-interest and how they can influence the epistemic foundations of classification. Philosophy has always grappled with the concerns of good and evil, but the recognition of it epistemically comes from critical approaches, which tend to be reactive rather than proactive in knowledge organization. As the focus on ethics and the incorporation of more critical approaches toward the epistemic evaluation of knowledge organization systems has increased in the last two decades, some focus should address moral uses of reasoning and application of epistemic stances, which will naturally raise questions of what morality is. The personal motivations of catalogers and classificationists arise in the literature associated with knowledge organization ethics, but no focused and detailed discussion of how this relates to epistemology have been done.

What, then, is the epistemology of self-interest? Hjørland (2008, n.p.) constructs an all-purpose category of authoritarianism, with several subconcepts “in order to cope with certain attitudes to knowledge not covered by other epistemological labels.” Several stances from this category apply here. Self-interest seems to fit into the category of “opportunism.” Hjørland defines opportunism as “what you argue is not determined by the best arguments in case but by what it seems opportune to support in the social situation.” The repeated justifications referring to the “law of nature” excluding women from the legal profession prevented self-definition, but also express a belief in the

universal, immutable nature of women's characteristics. The laws of God (or natural law): "Theism is the view that God has decided the social order and that human should not question this order" (Hjørland, 2008, n.p.). The laws of nature as a justification for knowledge contains the combined benefits to opportunists they can neither be proven nor questioned. All epistemic stances in practice have flaws, which is why philosophers for millennia have debated them.

Future Research

This research raised a range of diverse questions, many more than it answered. Further research could provide a more nuanced discussion of narrower slices of the areas covered in this project.

- The three gender concepts and the timeframes necessitated brief and at times uneven coverage. Future projects could investigate other concepts such as sexual orientation using a similar methodology or provide more depth of analysis of a particular timeframe or another discourse such as media or pedagogy.
- An empirical investigation similar to Christensen's (2011) of library shelves may also shed light on the idea of oppression experienced while browsing the shelves.

The project also raised questions about domain analysis and what constitutes a domain.

- If this discursive analysis resulted in an examination and identification of how concepts are used within a discipline or domain, what distinguishes it from domain analysis? Domain analysis incorporates several epistemic angles; how

are these incorporated in practice? Can digital frequency reflect the same value judgments as a discursive analysis?

- Certainly further research merits asking whether gender constitutes a domain. Using Smiraglia's (2012) definition of a domain as "a unit of analysis for the construction of a KOS" indicates the possibility; however, moving on to the more specific aspects of the definition: "an underlying teleology, a set of common hypotheses, epistemological consensus on methodological approaches and social semantics" all seem to lead in different directions, and back to the age-old question of whether gender is a social group. Does the conflicting scopes of the concept of gender mean it cannot constitute its own domain, but rather that it can only exist in relation to other domains?
- This project illuminated the gulf between "professed" and "enacted" epistemologies, and thus another area for future research includes ethical considerations in the application and use of epistemological approaches.

Critical approaches raise concerns about how knowledge is generated and whose knowledge it is, but these are reactive approaches and seek to revise existing systems. Despite the professed grievances issued toward the current systems in use, revising the master's tools is less painful than enacting ameliorative change. The knowledge organization discourse can be as entrenched as others in welcoming differing epistemologies. The vitriol directed at such resistance as the libraries enacting BISAC, newly-created system such as Szostak's phenomenon-based classification, or at RDA/FRBR replicates the resistance that women encountered as they attempted entry

into the discourse. A Foucaudian discourse analysis of the rebelling and resistance literature can reveal the ingrained attitudes within the KO discourse.

The Foucauldian methodology approaches the discourse from a presumption of instability, that the conceptualizations of each time frame exists unto itself rather than as part of a connected and transcendent continuum; however, in this case it revealed the utter entrenchment and persistence of social perceptions of women, intersex and trans people through a 100-year span. Foucault (1977a) believes that intellectuals are responsible, at a micro level, for “ascertaining the possibility of constituting a new politics of truth. The problem is not changing people’s consciousnesses—or what’s in their heads—but the political, economic, institutional regime of the production of truth” (p. 133). Here, what’s “in someone’s head” was sweepingly applied to entire gender categories. Worse, the discourses all in some way recognize individual instances that undermine the absolutist and rationalist method of knowledge-generation, but the legal discourse marks these instances as an immoral abnormality (e.g. women working is a “crime against nature”), the medical discourse distorts (e.g. studying hurts your reproductive system; women are too squeamish) and the *DDC* dutifully replicates the biases evident in the other discourses. Will knowledge organization tools continue to replicate the biases evident in society? Is there any way to escape this or should it be embraced? This circles us back to the question that most critical research eventually leads back to: Should a classification be useful or accurate?

Epilogue: Where Are We Now?

Another thirty-five years has passed since the last timeframe, and though much more subjectivity and rhetorical agency has been incorporated for the epistemic rendering of

subjects of legal gender, medical, and bibliographic classification, old models persist and social norms are inching toward an empathetic, if not sympathetic, view of gender. In medicine, though women are not overtly “othered” as they were in the past, research fields such as evolutionary biology, sociobiology, or neurology seek to find biological origins of sexual difference, where modern human behavior, such as sexual selection, is related to either animal or primal behavior. Feminist critiques of evolutionary biology point out the circular practice of imposing cultural stereotypes on animal behavior to explain human behavior (cf. Houde, 2001). Medical issues common to women such as stress-related conditions like sleeplessness are being identified, but are recognized as results of social influences. Money’s influence persisted into the early twenty-first century. Sexologist Milton Diamond and others critiqued his work throughout his career, most influentially in a 1997 paper written with Sigmundson that announced the fraud in the Joan/John case. Unlike Money’s announcement as a glowing success, at age 14, after years of resistance, Brenda Reimer finally demanded to be treated as a male, renamed himself David, and began treatment to transition back to being a male. He went on to get married and raise a family, but led a troubled life, eventually committing suicide in 2004. In 2001, John Colapinto wrote an investigative study that originated as an article in *Rolling Stone*, which uncovered Money’s flawed research methods.

The unearthing of Money’s embellished research corresponded with the rise of intersex rights. Intersex advocates have challenged and protested what Money considered “correction” as mutilation. The Intersex Society of America (ISNA), with the goal of creating “a world free of shame, secrecy, and genital mutilation for intersex people” was founded in 2008 to provide recognition and subjectivity for intersex people

(<http://www.isna.org>). Dreger (1998a) sees the “Age of Surgery” changing to “the Age of Consent,” but a stigma still accompanies intersex people. Many consumer medical resources are directed toward parents and patients, and medical discourse emphasizes the anguish of parents in the face of social gender pressure. However, intersex physical traits are still considered “abnormal” rather than “variant,” such as in the National Institute of Health’s MedlinePlus guide. It also uses the term “ambiguous genitals,” which is not preferred by the ISNA because of the implication that they need to be unambiguously situated in a specific sex (Storck, 2013). A parents-focused article about intersex conditions still uses the language of stigma, such as “normal,” and “abnormal,” and that the condition can be “severe” or “corrected.” Though sympathetic, the vestiges of the past are evident through statements such as “Surgeons are becoming increasingly aware that it is important for girls to retain normal sexual sensation after genital surgery” (Urology Cares, 2011), which distressingly suggests that some surgeons are not aware. A 2014 website for the condition congenital adrenal hyperplasia (CAH) which can result in genital variation hardly mentions that aspect, and makes a point to differentiate it from intersex. The website notes several times, however, where sexual function in women can be restored or retained. A recent medical study reported how elite women athletes had surgery to remove testosterone-producing testes and that the physicians recommended to the women to also have cosmetic procedures to normalize the appearance of their genitals (Berman, et al., 2013). However, through the media and the internet, the concept of intersex is gaining more widespread recognition as regular, everyday humans rather than pathologized as hermaphrodites.

	Males	Females
Genetic/chromosomal sex	XY	XX

Gonadal sex: reproductive sex glands	Testes	Ovaries
External morphologic sex	Penis and scrotum	Clitoris and labia
Internal morphologic sex	Seminal vesicles, prostate	Vagina, uterus, fallopian tubes
Hormonal sex	Androgens	Estrogens
Phenotypic sex (secondary sex features)	Facial and chest hair	Breasts
Assigned sex/gender of rearing	Male	Female
Gender identity	Male	Female

Table 3: Typical path of sexual differentiation (Greenberg, 2012, p. 13)

Table 3 shows the characteristics of sex differentiation as it is recently considered. Both women and men are subject to heteronormative assumptions, and despite more subjectivity, these are forms of classification are still engrained in society.

Recent legal cases are most commonly related to intersex or trans people marrying or divorcing. In the case of divorces, a spouse may have been intersex, or transsexual, and the original validity of the marriage is being challenged for various reasons. The next thirty years were spent chipping away at the Corbett test, leaning more toward the inclusion of gender identity in the mix of factors considered, but still with notable setbacks, mostly in conservative states (Greenberg, 2012, pp. 59-60). Most of these cases occurred in between 1997 and 2005. In 1999, *Littleton v. Prange*, another Texas case relating to the rights to an estate, stated that even if the new gender status was on the birth certificate, that did not guarantee the law would treat her as such (Allen, 2008, p. 178).

Either way, it appears that courts have bent over backwards to sidestep any decisions that might accidentally result in same-sex marriage. In 2002, *In re Estate of Gardiner*, the court wrote that despite the extensive procedures the trans wife had gone through, she still remained a male and thus their marriage was same-sex and therefore invalid. The decision read “The words “sex,” “marriage,” “male,” and “female” in everyday understanding do not encompass transsexuals. The common, ordinary meaning

of “persons of the opposite sex” contemplates what is commonly understood to be a biological man and a biological woman....A post-operative male-to-female transsexual is not a woman within the meaning of the statutes and cannot validly marry another man. (*In re Estate of Gardiner*, 2002). The language represents more fervent “othering” in the service of a scientific-sounding (“biological man”), legally justified (“cannot validly marry”) social norm. Several still stand, but a few were appealed and overturned by the courts of appeal in Kansas, Florida, Texas, and Ohio.

None of the above cases have intersex clients. One case in Texas in 2010 had what was likely an unintended consequence of allowing two women to marry because one spouse was intersex, but had “male” on her birth certificate, but had had surgery and presented as a woman since her late twenties (Netter, 2010). The marriage was declared invalid in 2011 based on *Littleton v. Prange*, a case that relied on the Corbett test, but ultimately reversed upon appeal in 2014. The bind for conservative courts is that transsexuals as a human group cannot be constitutionally banned from marriage, but depending on the timing and combination, it might be impossible to allow. For example, if a MTF trans married a man, it could be considered same-sex marriage if sex reassignment is considered invalid, but if she tried to marry a woman, then they have the appearance same-sex marriage. In order to enforce their conservatism, they have to allow some sort of what they consider non-traditional marriage. However, as same-sex marriage movement grows in stability and consistency, this point may eventually be moot.

The influence of more critical and subjective epistemologies evident in the legal and medical discourses are reflected in the recognition of the concepts of trans (for the first time) and intersex people in the most recent *DDC*. The twenty-third edition of the

DDC made a significant change in how sex and gender are classified by adding facets:

T1—081 People by gender or sex and **T1—0867 Transgender and intersex people**.

This means that rather than being in a class, works can also be gathered by a different subject and the facet is considered a descriptor than as a means to define. The *DDC* editors employed a methodological change for this edition by using the Dewey website and blog to get feedback on the how the concepts of intersex, transgender and asexual should be classed. Despite this effort, they received little response and problems persist with the latest iteration in that trans and intersex people share a facet and transsexuality is considered a sexual orientation. More work is to be done, but it is encouraging to see the editorial board attempting to take epistemic responsibility.

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ISKO Conference, 4-7 July 2006, Vienna, Austria. (Advances in knowledge organization, Vol. 10) (pp. 279-286). Würzburg: Ergon Verlag.

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- Ziegler, E.M. & Huntley, T.I. (2013). "It got too tough to not be me": Accommodating transgender athletes in sport. *Journal of College and University Law*, 39, 467-509.
- Zins, C. (2004). Knowledge organization: An epistemological perspective. *Knowledge Organization*, 31(1), 49-54.

CURRICULUM VITAE

Melodie Fox

Place of birth: Brainerd, MN

Education

M.L.I.S., University of Wisconsin-Milwaukee, 2005
Library & Information Science

M.A. University of Illinois at Chicago, 2001
English

B.A., University of St. Thomas, St. Paul, MN, 1996
English (Writing Concentration)
Minor: music (Piano Performance)

Dissertation Title: Gender as an 'Interplay of Rules': Detecting Epistemic Influence of Medical and Legal Discourse on Gender Classification in Four Editions of the *Dewey Decimal Classification*

PUBLICATIONS

Martinez-Avila, D. & Fox, M.J. (In press). The construction of ontology: A discourse analysis. In Hur-li Lee and Richard Smiraglia (eds.), *Untitled Ontology Reader*. Wurzburg: Ergon Verlag. *Invited*.

Martinez-Avila, D., Smiraglia, R.P., Lee, H.L., & Fox, M.J. (In press). What is an author now? Discourse analysis applied to the idea of an author. *Journal of Documentation*, 71(5). *Refereed*.

Fox, M.J. (2014). Enabling gender-inclusivity in LIS education through epistemology, ethics, and essential questions. *Journal of Education for Library and Information Science (JELIS)* 55(3). 241-249. *Refereed*.

Fox, M.J. (2014) Medical discourse's influence on gender classification in three editions of the *Dewey Decimal Classification*. In Wieslaw Babik, (ed.), *Knowledge Organization in the 21st Century: Between Historical Patterns and Future Prospects: Proceedings of the 13th International ISKO Conference, May 19-22, 2014*. Krakow, Poland. 228-225. Wurzburg: Ergon Verlag. *Refereed*.

- Fox, M.J. & Olson, H.A. (2013). Essentialism and care in a female-intensive profession. In Rebecca Dean and Patrick Keilty (eds.), *Gender, Sexuality, Information: A Reader*, Los Angeles: Library Juice Press. *Refereed*.
- Fox, M.J. & Reece, A.M. (2013). The impossible decision: Social tagging and Derrida's deconstructed hospitality. *Knowledge Organization* 40(4). 260-265. *Refereed*.
- Fox, M.J. (2012). Rhetorical space and the ontogeny of women in the DDC [extended abstract]. *Advances in Classification Research*, 2012, October 26, 2012, Baltimore, MD, USA. *Refereed*.
- Martinez-Avila, D., Fox, M.J., and Olson, H.A. (2012). Intersectionality in users of library knowledge organization systems: Lessons learned from the misrepresentation of Latina lesbians. Desafios e perspectivas científicas para a organização e representação do conhecimento na atualidade. Estudos Avançados em Organização do Conhecimento. v.1 (Proceedings of the First Annual Conference of International Society for Knowledge Organization, Brazil Chapter). 160-163. [Extended abstract]. *Refereed*.
- Fox, M.J. (2012). Communities of practice, gender and social tagging. In A. Neelameghan and K.S. Raghavan (eds.), *Categories, Relations and Contexts in Knowledge Organization: Proceedings of the Twelfth International ISKO Conference*, 6-9 August 2012, Mysore, India. 352-358. Wurzburg: Ergon Verlag. *Refereed*.
- Fox, M.J. & Reece, A. M. (2012). Which ethic? Whose morality?: An analysis of ethical standards for the organization of information. *Knowledge Organization* 39(5). 377-383. *Refereed*.
- Fox, M.J. & Olson, H.A. (2012). Feminist epistemologies and knowledge organization. In Hur-li Lee and Richard Smiraglia (eds.), *Cultural frames of knowledge*. Wurzburg: Ergon Verlag. 79-98. *Invited*.
- Fox, M.J. (2012) Book Review [of Szostak 2003 and 2004]. *Knowledge Organization* 39(4), 300-304. *Refereed*.
- Fox, M.J. (2011). Prototype theory: An alternative concept theory for sex and gender? *Knowledge Organization*, 38(4), 328-334. *Refereed*.
- Olson, H.A. & Fox, M.J. (2010). Gayatri Chakravorty Spivak: Deconstructionist, Marxist, feminist, postcolonialist. In Gloria J. Leckie, Lisa M. Given and John Buschman (eds.), *Critical theory for library and information science: Exploring the social from across the disciplines*. Santa Barbara, CA: Libraries Unlimited. *Invited*.
- Miller, S.E., Fox, M.J., Olson, H.A., & Lee, H.L. (2006). Great expectations: Professionals' perceptions and knowledge organization curricula. In Gerhard

Budin, Christian Swertz, and Konstantin Mitgutsch (eds.), *Knowledge Organization for a Global Learning Society: Proceedings of the Ninth International ISKO Conference*, 4-7 July 2006, Vienna. Würzburg: Ergon Verlag. *Refereed*.

PRESENTATIONS AND PANELS

Fox, M.J. (2014). Legal discourse's epistemic influence on gender classification in four editions of the *Dewey Decimal Classification*. Gender & Sexuality in Information Studies Colloquium, University of Toronto, Toronto, Ontario, Canada. October 18, 2014. *Refereed*.

Fox, M.J. (2014) Medical discourse's influence on gender classification in four editions of the *Dewey Decimal Classification*. 13th International ISKO Conference: *Knowledge Organization in the 21st Century: Between Historical Patterns and Future Prospects*, May 19-22, 2014. Krakow, Poland. *Refereed*.

Fox, M.J. (2014). Using discourse analysis to detect epistemic influence on formal gender classification. eHumanities Institute, Royal Academy of Arts and Sciences, Amsterdam, Netherlands. April 3, 2014. *Invited*.

Fox, M.J. (2014). Enabling entrepreneurship through epistemology, ethics, and essential questions. *ALISE 2014: Educational Entrepreneurship*, Gender Issues SIG: Educational Entrepreneurship in LIS to Further a Discussion of Gender-Based Issues. January 21-24, 2014, Philadelphia, PA. *Refereed*.

Fox, M.J. & Reece, A.M. (2013). The impossible decision: Social tagging and Derrida's deconstructed hospitality. *North American Symposium on Knowledge Organization*, June 13-14, 2013 Milwaukee, WI. *Refereed*. *Judged one of highest ranking papers by program committee

Fox, M.J. (2012). Rhetorical space and the ontogeny of women in the DDC. *Doctoral Student Symposium. Special Interest Group: Classification Research: The American Society for Information Science and Technology (ASIST) Conference*: October 26, 2012, Baltimore, MD. *Refereed*. Mentors: Rebecca Green and Julianne Beall

Fox, M.J. (2012). Communities of practice, gender and social tagging. *Categories, Relations and Contexts in Knowledge Organization: Twelfth International ISKO Conference*, 4-7 August 2012, Mysore, India. *Refereed*.

Fox, M.J. & Reece, A.M. (2012). Which ethic? Whose morality?: An analysis of ethical standards for the organization of information. *EIO2: Ethics of Information Organization II*. 14-16 June 2012 Milwaukee, WI. *Refereed*.

- Wadsworth, S. & Fox, M.J. (2012). The 1893 Woman's Building Library Database: Out of the Ashes, Onto the Internet. *Out of the Attic and into the Stacks: Feminism in LIS, the Unconference*, 9-11 March 2012, University of Wisconsin-Milwaukee. *Invited*.
- Martinez-Avila, D., Fox, M.J., and Olson, H.A. (2011). Intersectionality in users of library knowledge organization systems: Lessons learned from the misrepresentation of Latina lesbians. *First Annual Conference of International Society for Knowledge Organization, Brazil Chapter*. 21-22 October, 2011, Brasilia, Brazil. *Refereed*.
- Fox, M.J. (2011). Prototype theory: An alternative concept theory for categorizing sex and gender? *North American Symposium on Knowledge Organization*, June 16, 2011, Ryerson University, Toronto, Ontario, Canada. *Refereed*.
*Judged one of highest ranking papers by program committee
- Allen, M., Ahmad, S., Apmann, L., Chen, L., Ditzler, W., Fox, M.J., Frey, A., Gonnering, R., Grimes, D., Huang, H., Katz, J., Louk, A.C., Lu, S., Lulewicz, Lund, A., Maier, M.A., Rankin, E.A., Strharsky, L., van Dyke, E. & Zhang, Y. (2010). Evaluating doctoral programs in communication on the basis of citations. *National Communication Association Convention*, San Francisco, CA. *Refereed*.
- Fox, M.J. & Olson, H.A. (2010). A warning and an antidote: Essentialism and care in a female-intensive profession. *ALISE 2010: Creating a Culture of Collaboration, Gender Issues SIG: Collaborating to Address Gender Issues*. January 14, 2010, Boston, MA. *Refereed*.
- Fox, M.J. & McEvoy, S.E. (2009). Student support services: Advisement, counseling services, and employment services. *Wisconsin Educational Approval Board Annual Conference*. Madison, WI, November 19, 2009. *Invited*.
- Coyne, K., Miller, S.E., Olson, H.A., Fox, M.J. (2009). Trust, authority and power: The intersection of IO professionals with users, standards, and institutions. Panel presented at the *Ethics of Information Organization Conference*, May 22-23, 2009, Milwaukee, WI. *Invited*.
- Fox, M.J. (2008). Woman's Building Library: A relational database. Presentation given at Northwestern University Library, Evanston, IL, June 5, 2008. *Invited*.
- Fox, M.J. (2008). Woman's Building Library: A relational database. *Seminar in the History of the Book*. Rutgers University, New Brunswick, NJ, February 22, 2008. *Invited*.
- Wadsworth, S. & Fox, M.J. (2007). Regionalism, women's writing, and the Chicago world's fair. *Society for the History of Authorship, Readership, and Publication (SHARP) Annual Conference: "Open the Book, Open the Mind."* 11- 14 July, 2007, Minneapolis, MN. *Refereed*.

Miller, S.E., Fox, M.J., Olson, H.A., & Lee, H.L. (2006). Great expectations: Professionals' perceptions and knowledge organization curricula. *Knowledge Organization for a Global Learning Society: Ninth International ISKO Conference*, 4-7 July 2006, Vienna, Austria. *Refereed*.

Fox, M.J. (2005). Creating a digital tool to manage and facilitate research. *Canadian Symposium on Text Analysis (CaSTA)*, Edmonton, Alberta, Canada, October 6, 2005. *Refereed*.

POSTERS-MISCELLANEOUS PUBLICATIONS-PROJECTS

Fox, M.J. (2015). Information institutions as producers of precarious spaces: Gender and sex classification in the *Dewey Decimal Classification* [poster]. *Precarity: 2015 National Women's Studies Association Annual Conference*. Milwaukee, WI November 12-15, 2015. *Refereed*.

Fox, M.J. (2014). Digital humanities as a bridge over "troubled" waters: A reflection." e-newsletter 2 of the eHumanities Institute, Royal Academy of Arts and Sciences. <http://ehumanities.leasepress.com/emagazine-2/visitors/digital-humanities-as-a-bridge-over-troubled-waters-a-reflection/>

Fox, M.J. & Graf, A.M. (2011). Research and opinion: Mining the collective, reconsidering warrant [review of Lynn Howarth presentation]. *Cataloging & Classification Quarterly*, 49(6), 543-544.

Fox, M.J. (2007). *Bryant & Stratton College APA style guide*. Stamford, CT: Cengage.

Project Consultant (2004-present). Women's Building Library Database Project.

AWARDS AND HONORS

Information Organization Research Group Conference Support \$1000 (2014)

"The Impossible Decision: Social Tagging and Derrida's Deconstructed Hospitality" judged one of four highest ranking papers by program committee at the *North American Symposium on Knowledge Organization Conference 2013* (co-authored)

Information Organization Research Group Conference Support \$1000 (2012)

"Prototype theory: An alternative concept theory for categorizing sex and gender?" judged one of four highest ranking papers by program committee at the *North American Symposium on Knowledge Organization Conference 2011*

Chancellor's Award Scholarship, UWM 2010 (\$500), 2011 (\$500), 2012 (\$500), 2013 (\$180)

Deans' Scholarship (\$500), SOIS, UWM 2009-10

Inaugural "Featured Graduate Student of Excellence," UWM Graduate School homepage February 2009 (now archived)

SOIS Academic Scholarship 2008-2013, University of Wisconsin-Milwaukee

Phi Beta Mu, Library and Information Science Honor Society

2009 Director's Award, Bryant & Stratton College

Teaching portfolio leader, Milwaukee Market, Bryant & Stratton College

EXPERIENCE IN EDUCATION

Bryant & Stratton College, Milwaukee Market

Dean of Instruction, Milwaukee Campus · 2008 – present

- Oversee academic operations for an 800-1,000-student campus of a regionally-accredited career college.
- Manage, develop, coach, and evaluate seven academic department chairs, adult high school coordinator, and librarian, and indirectly oversee approximately 100 full time and adjunct faculty and academic staff.
- Ensure academic outcomes are appropriately assessed and achieved.
- Write annual faculty development plan based on needs assessment and college strategic plan, devising and delivering new initiatives and programming for faculty.
- Contribute to the academic portion of the Institutional Effectiveness and Strategic Plans, and write regular assessment reports on student outcomes and faculty development.
- Assist Student Services and Admissions with retention, recruitment efforts, and academic support.
- Handle academic appeals, SAP appeals, grade challenges, disciplinary proceedings and grievances.
- Manage \$3 million instructional budget (personnel, capital, and operations).
- Serve as ADA coordinator.
- Collaborate with instructional deans at other campuses to ensure consistent messaging, rigor, and outcomes.
- Facilitated faculty development in-services and workshops on the following topics (among others):

Writing across the curriculum	Flipping the classroom
Information literacy across the curriculum	Rubrics
Community of inquiry framework	Essential questions
Classroom management	Active learning & student engagement
Adaptive learning technology	Plagiarism & academic dishonesty
- Led campus through significant changes, including credential policy changes; launch of new curriculum and programs, and transition to digital learning platforms, including blended courses and adaptive learning technology.

Associate Dean of Instruction · 2006 - 2008
 Academic Program Director for English and Communication · 2005 - 2008
 Instructor of English and Communication · 2002 - 2006

Courses Taught

ENGL099: Pre-College English *ENGL100: Composition and Research*
ENGL110: Oral Presentations *ENGL305: Advanced Research and Writing*
LIBS100: Information Literacy *ENGL230: Writing for Business and*
Technology
ENGL101: Research & Writing I

Course co-development:

LIBS100: Information Literacy and Research (Bryant & Stratton College)
 I&ST79X: Social & Cultural Issues in Information Organization (University of Wisconsin-Milwaukee)

UWM School of Information Studies Guest lecture on authority control, in L&IS 511: Information Organization, October 25, 2011 (2.5 hours) *Invited*.

The Tutorium in Intensive English at the University of Illinois at Chicago, Chicago, IL

Graduate Assistant · 1998 - 2000

- Advised international students in immigration, scholastic and personal matters
- Assisted in the planning and execution of student events
- Produced newsletters, promotional materials and other written materials

St. Aemilian-Lakeside, Milwaukee, WI

Teaching Assistant · 1996 - 1998

• Taught behavior modification and general education to emotionally disturbed boys

SERVICE

Conférencière · Ethics in Knowledge Organization III Conference *May 28-20, 2015*

Knowledge Organization · [journal of classification research, epistemology, and concept theory]

Editor, Book Reviews · 2015-present

Editorial Assistant/Reviewer · 2010-present

Reviewer · Association for Information Science & Technology (ASIST) Annual Meeting 2014, 2015

Judge · University of Wisconsin System Undergraduate Research Symposium- 2014, 2015

Program Committee • North American Symposium for Knowledge Organization (NASKO)

2013 Conference, Milwaukee, WI, June 13-14

2015 Conference, Los Angeles, CA, June 18-19

Research Committee • UWM School of Information Studies • Doctoral Student Representative • 2013-14

Knowledge Organization (KOrg) Research Group • UWM School of Information Studies • 2008-present

Fox, M.J. (2006-2007). *Writing across the curriculum*. Presented in a series of six Bryant & Stratton College in-services in May & September 2006 and January 2007.

Editorial Assistant • *Literature and Medicine* [journal of the medical humanities] • 1999 to 2000

Committee Work • Bryant & Stratton College
 Faculty Recognition Committee, *Chair*
 Systems Faculty Development Committee, *ad hoc member*
 Systems Information Literacy across the Curriculum Committee, *member*

Volunteer • VISION Service Program • St. Vincent, West Indies • January 1996

PROFESSIONAL AFFILIATIONS

Modern Language Association (**MLA**) 2010-present

International Society for Knowledge Organization (**ISKO**) 2008- present

Association of Library and Information Science Educators (**ALISE**) 2008-present

Society for the History of Authorship, Readership, and Publication (**SHARP**) 2007-present

Wisconsin Women in Higher Education Leadership (**WWHEL**) 2006- present

National Council of Teachers of English (**NCTE**) 2006-2011

Association for Information Science and Technology (**ASIS&T**) 2004-present

American Library Association (**ALA**) 2004-present

Wisconsin Library Association (**WLA**) 2004-present