

THE DEVELOPMENT OF THE ATTITUDES TOWARD THE ATYPICALLY
GENDERED INVENTORY (ATAG-I)

Kand S McQueen

Submitted to the faculty of the University Graduate School in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the Department of Counseling
and Educational Psychology of the School of Education,
Indiana University

February, 2008

Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the
requirements for the degree of Doctor of Philosophy

Doctoral Committee

Chairperson: Phil Francis Carspecken, Ph.D.

Director: Carol Hostetter, Ph.D

David B. Estell, Ph.D

Cathy King Pike, Ph.D.

February 15, 2008

© 2008

Kand S McQueen

ALL RIGHTS RESERVED

Dedication

To Judy L. Malschick. We did it.

Acknowledgments

Carol Hostetter, Ph.D. School of Social Work, Indiana University

Cathy King Pike, Ph.D. School of Social Work, Indiana University—Purdue University
Indianapolis

David B. Estell, Ph.D. School of Education, Indiana University

Phil F. Carspecken, Ph.D. School of Education, Indiana University

Abstract

Kand S McQueen

Development of the Attitudes Toward the Atypically Gendered Inventory (ATAG-I)

There are presumably two and only two kinds of people in the world: men and women. Above all else, male and female are seen as mutually exclusive, complementing but never overlapping, categories. Like much of the world, Western society rests on the assumption that all persons exist unambiguously as either man or woman.

The foundation undergirding this work posits that the discrete categories of male and female fail to adequately describe that part of human experience referred to as sex and gender, evidenced by the existence of two naturally occurring challenges to this binary: the transgendered and the intersexed. The goal of this work was to develop a reliable and valid assessment of societal attitudes toward the atypically gendered.

Construction of the ATAG-I involved five steps: 1) A list of potential items was composed via the domain-sampling method of instrument development based on content analysis of the relevant literature; 2) A retranslation task was conducted on a group of three atypically gendered participants; 3) A second retranslation task was conducted on a small group of naïve adults; 4) A test-retest analysis was conducted; 5) Data was collected on a large sample for reliability analyses and to gather evidence of content and construct validity. The result was a valid instrument that yielded highly reliable scores.

Contents

| | | |
|-----------|-------------------|-----|
| Chapter 1 | Introduction | 1 |
| Chapter 2 | Literature Review | 5 |
| Chapter 3 | Methods | 82 |
| Chapter 4 | Results | 101 |
| Chapter 5 | Discussion | 130 |
| | References | 142 |

Tables

| | |
|---|-----|
| 4.1 Descriptives and t-Tests for the Assumption of Normal Distribution for the Attitudes Toward the Intersexed Scale, and the Attitude Toward the Transgender Scale | 111 |
| 4.2 Item Descriptives for the Attitudes Toward the Intersexed Scale | 112 |
| 4.3. Reliability Analysis for the Attitudes Toward the Intersexed Scale | 113 |
| 4.4. Item Descriptives for the Attitudes Toward the Transgendered Scale | 115 |
| 4.5. Reliability Analysis for the Attitudes Toward the Intersexed Scale | 116 |
| 4.6. Eigenvalues, Percentages of Variance and Cumulative Percentages for Eigenvalues Greater than 1 and the Sum of Squared Loadings for the Rotated Factor Solution | 117 |
| 4.7. Summary of Communalities and Pattern Matrix Factor Loadings for the Promax Two-Factor Solution of the Attitudes Toward the Atypically Gendered Inventory | 120 |
| 4.8 Correlations Among the Index of Attitudes Toward Homosexuals, the Attitudes Toward the Intersexed Scale, and the Attitudes Toward the Transgendered Scale | 122 |
| 4.9. Descriptives for the Index of Homophobia as a Function of Demographic Variables | 124 |
| 4.10. Descriptives for the Attitudes Toward the Intersexed Scales as a Function of Demographic Variables | 125 |
| 4.11. Descriptives for the Attitudes Toward the Transgendered Scale as a Function of Demographic Variables | 126 |

| | |
|---|-----|
| 4.12. One-Way Analyses of Variance for the Effects of Religiosity, Political Affiliation, Etiological Beliefs, and Personal Contact on the Index of Homophobia Scale | 128 |
| 4.13. One-Way Analyses of Variance for the Effects of Religiosity, Political Affiliation, Etiological Beliefs, and Personal Contact on Attitudes Toward the Intersexed Scale | 128 |
| 4.14. One-Way Analyses of Variance for the Effects of Religiosity, Political Affiliation, Etiological Beliefs, and Person Contact on Attitudes Toward the Transgendered Scale | 129 |
| 4.15. Results of the Test for Order Effects | 129 |
| 5.1. Results of the Regression Analysis Predicting Total ATT-S Score From Two Items Pertaining to Children | 139 |

Figures

| | |
|---|-----|
| 2.1 Indifferent Stage of Genital Development | 10 |
| 2.2 Commonalities of Male and Female Genitalia | 10 |
| 3.1 Layout of the 5- and 10-Response Generic Machine Scored Answer Sheets | 88 |
| 4.1. Scree plot of Eigenvalues of the Principal Components Analysis | 117 |

Appendixes

| | | |
|------------|---|-----|
| Appendix A | Types and Approximated Frequencies of Intersexuality | 160 |
| Appendix B | DSM-IV Diagnostic Criteria for Gender Identity Disorder | 162 |
| Appendix C | DSM-IV Definition of Mental Disorder | 164 |
| Appendix D | Attitudes Toward Transsexualism in a Swedish National Survey | 165 |
| Appendix E | The Genderism and Transphobia Scale | 168 |
| Appendix F | First Draft of the ATAG-I | 170 |
| Appendix G | Demographics | 176 |
| Appendix H | The Revised and Final Version ATAG-I | 180 |

CHAPTER ONE

Introduction

There are presumably two and only two kinds of people in the world: men and women. This binary notion of gender is not only assumed by Western thought but permeates our experiences of the world and is the foundation of our identities. It represents two radically contrasting possibilities and determines both how we view ourselves and how we will be viewed by the world around us (Diamond, 1992). One of the first issues considered by prospective parents is, “Boy or girl?” As we encounter people we automatically categorize them as male or female. The dichotomy is so ingrained in our psyches we are typically unaware of this propensity to categorize until we experience someone whose membership in the binary is uncertain, at which point we stop and ask, “Is that a man or a woman?” (Kessler & McKenna, 1978; Lorber, 1994). Accompanying this dichotomous archetype are very stringent socially constructed rules and regulations defining precisely what it means to be a man or woman. Above all else, male and female are seen as separate entities, mutually exclusive, complementing but never overlapping categories. Like much of the world, Western society rests on the assumption that all persons exist unambiguously as either man or woman (McQueen, 2006).

The foundation undergirding this work posits that the discrete categories of male and female fail to adequately describe that part of human experience referred to as sex and gender, evidenced by the existence of two naturally occurring challenges to this binary: the transgendered and the intersexed (collectively referred to herein as *the atypically gendered*). The goal of this work is to develop a reliable and valid assessment

of societal attitudes toward the atypically gendered (ATAG). There are both substantive and theoretical goals in this work. Substantively, the goal is to gain insight into how the atypically gendered are viewed. There currently exists only a handful of measures that make an attempt to assess attitudes mostly toward transsexuals (a specific type of transgenderism) and nothing that addresses attitudes toward the intersexed.

Consequently, very little is known about society's views of the atypically gendered. Because anecdotal information suggests a preponderance of ignorance and erroneous misconceptions concerning the intersexed and outright negative attitudes toward the transgendered, an accurate assessment of these attitudes is warranted. Theoretically, the goal is to lay the groundwork for future study. Once attitudes toward the atypically gendered can be systematically assessed, future work can explore predictors of negative attitudes, identify groups who hold particular attitudes, and examine why people hold the attitudes they do. Perhaps ultimately, a better understanding of that part of human experience referred to as sex and gender beyond our current binary system can eventually be realized.

The terms *sex* and *gender* are often differentiated, with *sex* typically referring to the biological, chromosomal, and anatomical features associated with maleness and femaleness, and *gender* representing a socially constructed phenomenon referring to that which society deems "masculine" or "feminine" (Carroll, Gilroy, & Ryan, 2002; Kessler, 1998). In other words, gender is located above the belt, while sex is located below (Benjamin, 1966). Gender is learned at the interactional level, reified at the cultural level, and enforced by various institutions including the family, the legal system, religious institutions, the political system, medicine, and the media. In Western societies,

sex and gender are enmeshed, as gender, gender roles, and gender expectations have been defined by biological sex, specifically external genitalia (Gagne, Tewksbury, & McGaughey, 1997). Several implications have been drawn from the sex/gender distinction: While we are born male and female, we learn to be men and women; sex is biologically determined, gender is socially constructed; sex is nature and gender is nurture. Given these examples, it can be seen that our ways of understanding this feature of humanity is deeply dependent on the use of dichotomies (Fausto-Sterling, 1993b).

There are at least two groups of people who provide a naturally occurring challenge to the two-sex/two-gender paradigm: the intersexed and the transgendered. In the majority of instances, people who perceive themselves as male are born with male genitalia and those who perceive themselves as female are born with female genitalia. The exceptions are transgendered persons (Cook-Daniels, 1997), who either permanently or periodically do not identify with the sex they were assigned at birth (Carroll et al., 2002). Transgendered individuals physically appear to be one sex, but inwardly feel as if they are the other sex. As such, the transgendered provide a psychological challenge to the two-and-only-two gender assumption. Intersexuality is an umbrella term that is used to describe a variety of congenital conditions in which an individual develops neither the standard male nor standard female anatomy (Dreger, 1999a). These individuals are born with ambiguous anatomies and exist physically somewhere between or beyond the discrete categories of male and female, thereby providing a physical challenge to the sex/gender dichotomy.

Those who fail to “do” their sex/gender correctly are regularly punished (Butler, 1999). Gender variant children are often forced into reparative therapies by well-meaning

but confused parents. Effeminate males and masculine women are often met with scorn, ridicule, violent confrontations, or rape. Children with anatomies that fail to provide easy classification of either boy or girl are typically subjected to major invasive medical procedures that often leave them physically and emotionally scarred. That part of human experience collectively referred to as sex and gender has been socially constrained to a strict dichotomy, which has ultimately excluded a good many people.

Sex and gender are pervasive. Our participation in the binary is not voluntary. Even if we choose not to “do” a particular gender, others will do it for us in that one of the two genders will be assigned to us. If our sex/gender is either inconsistent or not readily observable, we will be seen as social failures. Causing others to be uncertain or wrong about our sex/gender violates society’s taken-for-granted rule of *two-and only-two* and leads to embarrassment and discomfort for all concerned (Lucal, 1999).

The development of a psychometrically sound instrument based on a solid theoretical foundation that provides a reliable and valid assessment of attitudes toward the atypically gendered can provide a means to help us to begin to understand more precisely how people feel about those who transcend the traditional boundaries of male and female, which in turn can lead us to understand why. Developing a better understanding of why we hold the attitudes we do may ultimately lead us to a better comprehension, appreciation, and acceptance of all people: male, female, and otherwise.

CHAPTER TWO

Literature Review

In an effort to set the context for this discourse, a review of the literature concerning atypically gendered populations is provided. This is followed by a discussion of historical alternatives to the two-and-only-two-sex/two-gender paradigm. In order to illustrate the importance of this study, a discussion of the extent of modern day society's commitment to the dichotomous notion of sex/gender is provided. At this point, the focus shifts to a discussion of the psychological constructs of attitude, bias, and prejudice, which concludes with an examination of the few existing attempts to assess attitudes toward transgendered populations.

SEX, GENDER, AND NATURALLY OCCURRING CHALLENGES TO THE SEX/GENDER BINARY

There exist at least two populations of people who provide naturally occurring challenges to the two-and-only-two sex/two gender paradigm: the intersexed and the transgendered.

Intersexuality

In the early 1960s, the International Olympic Committee instituted a policy of "gender verification" to ensure that competing female athletes were indeed women and not men masquerading in drag. (There is no comparable test for male contenders.) In 1985, Maria Jose Martinez Patino, Spain's top contender for the 1988 Olympics, was scheduled to run the 60-meter hurdles at the World University Games in Kobe, Japan (Carlson, 1991; Fausto-Sterling, 2000; Grady, 1992). In Kobe, Patino neglected to bring her "certificate of femininity" and was required to report to "sex control" where she

underwent a buccal smear cheek-scrape chromosome test and subsequent physical examination. On the way to the stadium for her first race she was given the news that she had failed the sex test. While Patino looked like a woman, had the strength of a woman, and had never questioned her membership in the female category, the medical procedures revealed that she had a Y chromosome, no ovaries or uterus, and concealed testicles in her abdomen. She was barred from competing on the grounds that she was not woman enough to qualify. Patino was counseled to fake an injury and quietly withdraw from the University Games, to which she complied. Once back in Spain, Patino was subjected to a series of medical tests and was eventually banned from further competition. Once again, it was suggested that she feign an injury and quietly retire; she refused and the story became public. Within months, she was stripped of all past titles, barred from competition, evicted from the national athletic residence, and lost her scholarship, her boyfriend, and several of her friends. Mario Patino, and millions of human beings like her, exist somewhere in between the biological categories of male and female and are known as *intersexed*.

A blanket term used to describe a variety of congenital conditions, intersexuality, as well as the older term *hermaphroditism*, describe an individual who develops neither the standard male nor standard female anatomy (Dreger, 1999a). There are at least 15 specific intersexed conditions (Intersex Society of North America [ISNA]), each of which has a particular cause (Kessler, 1998; Russo, 1983; Winterer, Cassorla, & Loriaux, 1986) (see Appendix A). Generally speaking, intersexuality occurs as a response to an exposure to a hormonal imbalance in the womb (Castro-Magana, Angulo, & Collipp, 1984).

In order to understand atypical sexual development, it is useful to first have a

grasp of how sex differentiates in the womb in non-intersex cases. Essentially, there are three classifications of physical sex: chromosomal sex, gonadal sex, and phenotypic sex (Bomalaski, 2005). Chromosomes carry genetic information in the form of DNA and contribute to, among other things, the determination of sex. An individual's genetic makeup is known as the *genotype*. *Gonads* are organs such as a testis or an ovary that produce reproductive cells (sperm and eggs respectively). *Phenotype* is the observable physical characteristics of an individual and in the current context refers to overt traits that are specifically male or female (e.g., a beard or breasts). A fertilized egg, or zygote, develops into a male or female fetus through a series of chronological and structured steps known as *embryogenesis*.

The first level of sexual differentiation occurs at the level of chromosomes, which are found in the nuclei of cells throughout the body. Each cell in the typical human body contains 46 chromosomes, 23 of which come from the mother and 23 from the father. Two of these chromosomes are considered *sex chromosomes* and are designated *X* and *Y*. During fertilization, the egg and the sperm, which are also known as germ or gametes, join to form the human embryo. Typical human germ cells have 23 chromosomes each. In the egg, one of the 23 chromosomes is an *X*, while in the sperm one of the 23 chromosomes is either an *X* or a *Y* chromosome. If an *X*-bearing sperm fertilizes the egg, the result is an embryo with 46 chromosomes, two of which are *X*s, which is denoted as 46,XX; typically, this combination will develop into a girl. Conversely, the joining of an egg with a *Y*-bearing sperm results in a 46,XY combination that will typically develop into a boy (Bomalaski, 2005).

All developing embryos start out with identical gonads that will usually develop

into either testes or ovaries. During the first six weeks of development, which is known as the *indifferent stage*, both XX and XY embryos have identical looking gonads. Around week seven, a gene on the Y chromosome known as the *SRY gene* calls for the production of a hormone known as *testis-determining factor* (TDF). The presence of TDF causes the indifferent gonads to develop into testes; in the absence of the SRY gene, no TDF is produced and the gonads will transform into ovaries (Bomalaski, 2005; The Hospital for Sick Children, 2005). Note that both ovaries and testes come from identical tissue; it is the exposure to hormones that determine whether the indifferent tissue will develop into an ovary or a testis.

In addition to internal gonads, developing fetuses have two sets of internal tube-like structures called *urogenital ducts*: the *Wolffian ducts* and the *Mullerian ducts*. As with the gonads, these ducts are indistinguishable for both XX and XY embryos for the first six weeks of development. Starting in the 7th week, the SRY gene on the Y chromosome causes the testes to produce two hormones: testosterone and *Mullerian inhibiting substance* (MIS). The presence of testosterone causes the Wolffian ducts to develop into spermatic ducts, while exposure to MIS causes the Mullerian ducts to atrophy and eventually disappear altogether (Zaparackaite & Barauskas, 2003). During the final trimester of development, the influence of MIS, testosterone, mechanical pressures, and neurologic mediation, cause the testicles to drop or descend into the scrotum. In the absence of the SRY gene, no MIS or testosterone is produced. As a result, the Wolffian ducts atrophy and disappear, while the Mullerian ducts become the uterus, fallopian tubes, and part of the vagina (Bomalaski, 2005).

As with both gonadal and urogenital duct development, the genitals of XX and

XY fetuses also have an indifferent stage of development for the first six weeks. At this point, the genital structure for both male and female embryos is composed of the *genital tubercle* or *phallus*, the *Labioscrotal swelling*, the *urogenital folds*, and the *urogenital membrane* (see Figure 2.1). In typical XY fetuses, testosterone produced in the testes interacts with the enzyme *5-alpha reductase* to form the more potent *dihydrotestosterone* (DHT). The presence of DHT causes the genitals to masculinize or *virilize*. The genital tubercle tissue elongates and develops into a penis while the labioscrotal swelling develops into the scrotum. In the absence of DHT, the genital tubercle develops into a clitoris, the urogenital fold becomes the labia minora, and the labioscrotal swelling transforms into the labia majora. As with gonadal development, the male and female genitalia both come from the same source. For example, the penis and the clitoris come from identical tissue; it is the hormone exposure that determines the direction of development. Figure 2.2 illustrates the commonalities of the male and female genitalia.

Neither the Standard Male nor Standard Female Anatomy.

In the development of non-intersexed embryos, chromosomal sex predetermines gonadal sex, which in turn predetermines phenotypic sex (Bomalaski, 2005). If development deviates at any stage in the process, intersexuality can result. Until recently, modern medicine grouped intersexuality into three categories (Kessler, 1998). Conditions where both ovarian and testicular tissue are present in either the same or in opposite gonads were termed *true hermaphrodite*. It is estimated that true hermaphroditism accounts for fewer than 5% of all cases of sexual ambiguity. More commonly, the intersexed infant has either testicles or ovaries, but the external genitalia is ambiguous. If the infant has two ovaries, the condition was termed *female pseudohermaphroditism*,

Figure 2.1. Indifferent Stage of Genital Development

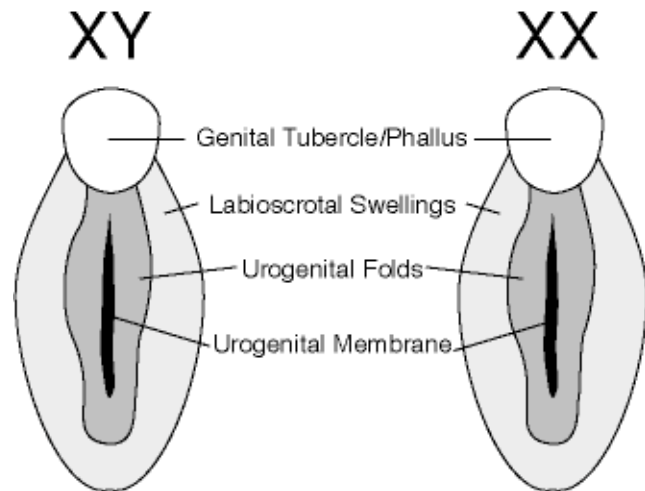
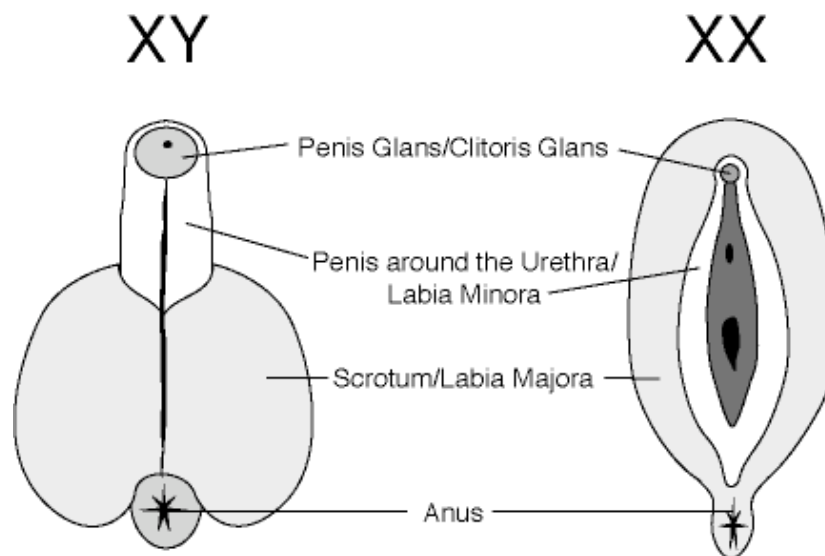


Figure 2.2. Commonalities of Male and Female Genitalia



regardless of external appearance. Similarly, if the infant has two testes, the condition was known as *male pseudohermaphroditism*. Under this system of classification, biological sex was defined solely by the state of the gonads. The historical era when this classification system came into vogue has been called “The Age of Gonads” (Dreger, 1999a).

In recent years, adult intersexuals argued to eschew the term *hermaphrodite* in favor of using the name of the specific condition. It has been argued that the term is confusing and some intersexuals find it offensive (Creighton, 2000). Given the controversy, the American Academy of Pediatrics has only very recently proposed that all cases of intersexuality be termed *Disorders of Sex Difference (DSD)* (Lee, Houk, Ahmed, & Hughes, 2006). Although the term has been embraced by some intersex organizations (e.g., Intersex Society of North America [ISNA]), others have taken offense to this name (e.g., Organisation Intersex International, 2006). Among other things, issue is taken with referring to an intersexed condition as a *disorder*. Because of this controversy, the term *intersex* will be used throughout this discussion.

Maria Patino’s condition is known as Complete Androgen Insensitivity Syndrome (AIS) and occurs when a fetus with XY chromosomes lacks the androgen receptors necessary for the virilization of the developing embryo. Even though AIS individuals have male chromosomes, externally they appear female. Internally, they have no ovaries, fallopian tubes or uterus. The vagina is blind-ending, meaning it does not lead to a cervix or uterus, and is often short or sometimes absent. Undescended testicles not externally apparent are present in the abdomen (Androgen Insensitivity Syndrome Support Group [AISSG], 2002). The presence of testicles makes AIS a type of male

pseudohermaphroditism. Because routine infant and early childhood physical exams indicate nothing atypical with the female-looking anatomy, the first signs of the disorder usually appear during the teen years when menstruation and other pubertal development fail to occur.

Accurate numbers on the frequency of intersexuality are difficult to assess (Intersex Society of North America [ISNA]). For example, cases of chromosomal abnormality do not always result in ambiguous genitalia (as in the case of androgen insensitivity syndrome) and consequently are not always reported as intersex. One estimate is that abnormal genitalia is present in approximately one out of every three hundred male births (Intersex Society of North America [ISNA]; Kessler, 1998). In contrast, a review of the medical literature from 1955-1997 led to the conclusion that the prevalence of intersexuality may well be as high as 2% of all live births (Blackless et al., 1997) (see Appendix A). Additionally, it has been estimated that approximately five intersex surgeries are performed daily in the United States, all of which are done with the intention of *normalizing* the body (Intersex Society of North America [ISNA]).

What is Maria Patino? Using accepted medical technology, it was ruled that she was not a woman. If sex/gender truly exists as a dichotomy and Patino is not female, the remaining alternative is that she is a man. But does the label *male* describe this person any better than *female*? The very existence of intersex individuals presents a very clear and logical challenge to the two-sex/two-gender assumption and raises some important questions. Consider the case of Maria Patino: By all outward appearances, this person was a woman, and yet she was not allowed to compete as one. Had her performance been adequate, would the Olympic committee have simply allowed her to compete in the

men's hurdles? Was this possibility even considered at the time? Where does an individual like Patino fit into current laws that define marriage as a union between one man and one woman? Patino has male chromosomes and testicles. Should she be allowed to marry a woman? A man? Should she be allowed to marry at all? If the only existing possibilities are *male* and *female*, what exactly is Maria Patino and where does she fit in the two-sex/two-gender paradigm?

Transgenderism

On Memorial Day, May 30, 1926, George William Jorgensen was born to working-class Danish-American parents (Jorgensen, 1967). As a child and adolescent, Jorgensen was drawn to clothing and activities considered appropriate for girls, was repeatedly singled out by both peers and adults for being *girly*, and always felt like he was, in some fundamental way, female. During puberty, he watched his male peers experience pubertal virilizations while his development seemed to lag behind. Even as an adult, he described himself as *slight* with *underdeveloped* genitals. Jorgensen was drafted three times and was twice exempted from service due to his small stature. WWII had ended by the time he was drafted the third time and, despite weighing only 95 pounds, passed his physical and entered the army. Jorgensen describes this period as a time of emotional depression and despair coupled with a self-imposed withdrawal due to his inability to feel that he fit in with the rest of the world. After his discharge from the service, he began studying the relatively new field of endocrinology in an effort to better understand himself. At one point, he convinced a pharmacist to sell him estrogen tablets without a prescription and began self-administration. Within a short time, he saw signs of early breast development and experienced an increase in energy that provided a respite

from a lifelong fatigue. Eventually, Jorgensen traveled to Copenhagen where doctors were experimenting with what would eventually become known as sex reassignment procedures. In 1951, after a prolonged period of tests and hormone therapies, he underwent the first of three sex reassignment surgeries (SRS) and took the name *Christine*, in honor of his Doctor, Christian Hamburger. News of this ‘sex change’ hit the American press December 1, 1952 with a banner from the *New York Daily News* that read, “Ex-GI Becomes Blonde Beauty: Operations Transform Bronx Youth.” In spring 1954, it was reported that Jorgensen’s story had generated more news copy than any other individual during the previous year. Years later, Jorgensen pondered the irony that her story “...pushed the hydrogen bomb tests at Eniwetok right off the front pages” (pp. 172-173).

Jorgensen’s condition has been labeled *transgenderism*. Typically, people who perceive themselves as male are born with male genitalia and those who perceive themselves as female are born with female genitalia. The exceptions are transgendered persons (Cook-Daniels, 1997). Transgenderism is an umbrella term (Hartley, 2005) that refers to those who either permanently or periodically do not identify with the sex they were assigned at birth (Carroll et al., 2002).

There are several recognized transgendered conditions. A *cross-dresser* is an individual who regularly dresses in clothing that is culturally associated with members of the ‘opposite’ sex. The terms *drag kings/queens* refer to people who cross-dress for entertainment purposes (Carroll et al., 2002). A *transsexual* is a person who lives full time as the ‘opposite’ gender and describes people like Christine Jorgensen. This includes biological males who live as females (male-to-female or MTF) as well as biological

females who live as males (female-to-male or FTM). Some, but not all transsexuals choose to use hormones and/or surgical procedures to alter their primary and/or secondary sex characteristics. Consequently, transsexuals may be *pre-operative*, meaning they intend to have at least one surgery in the future, *post-operative*, meaning they have completed at least one surgery, or *non-operative*, meaning they do not intend to have any gender-related surgeries at all. While all pre- and post-operative transsexuals take hormones, some non-operative transsexuals do not (Cook-Daniels, 1997). The term *genderqueer* is used as a non-specific category to undermine the idea of gender categories entirely. People who identify as genderqueer might understand themselves neither as men nor women, but rather, as something else altogether. For these people, gender identity is fluid; sometimes they may feel male, sometimes female, sometimes neither. Some eschew traditional sexed pronouns like ‘he’ and ‘she’ for the trans pronouns, ‘ze’ and ‘hir,’ others alternate between masculine and feminine pronouns, while others avoid pronoun usage altogether (Love, 2004).

Historical Overview of Transgenderism.

The histories of transgenderism and homosexuality are somewhat enmeshed. During the 18th century, homosexual behavior was considered illegal, while male cross-dressing behavior was seen as an *innocent pleasure*. The emergence of sexology in the late 19th century brought about some changes (Hird, 2002). Rather than being seen as criminal behavior, homosexuality came to be viewed as a biological ailment, a sickness rather than a crime. The diagnosis of *sexual inversion* started appearing in the medical literature in the late 1800’s and was used to describe individuals who deviated from their culturally prescribed gender roles (Bartlett, Vasey, & Bukowski, 2000). Sexual inversion

was described as a reversal of gender identity of which homosexual behavior might or might not have been an aspect.

Early sexologist von Krafft-Ebing took measurements of the hips, ears, faces, pelvises and skulls of both living and deceased “inverts” in an attempt to discover a biological cause of the condition (Hird, 2002). American psychologist George Beard wrote in 1884, “[When] the sex is perverted, they hate the opposite sex and love their own; men become women and women men, in their tastes, conduct, character, feelings and behavior” (Bartlett et al., 2000, p. 753). Female inverts were described as having, among other things, a dislike and incapacity for needlework and an inclination for the sciences. Male inverts were viewed as being sentimental, non-smoking chatterboxes who had a fondness for cats and an aversion to outdoor games. Interestingly, von Kraft-Ebing considered male-to-female (MTF) inverts to be failed men and female-to-male (FTM) inverts to be intelligent, accomplished and independent women (Bartlett et al., 2000; Hird, 2002).

The literature of the next several decades paid little attention to the so-called pathologies related to gender role, until Christine Jorgensen’s much publicized sex-change operation in 1952 (see Appendix A). By the late 1960’s, sex-change, or sex reassignment surgeries (SRS), had become a popular treatment for transsexualism (Bartlett et al., 2000).

The 1970’s saw a trend in prevention aimed at children deemed at risk for developing adult transsexualism (Bartlett et al., 2000). The term *transgender* first appeared in the late 1980’s and was coined by men who did not find the label *transvestite* sufficient to describe their condition (Carroll et al., 2002). Prior to this time, it was

assumed that cross-dressing behavior was done for purposes of sexual gratification (Baker, 1968), so the term *transvestite* carried with it a fetishistic connotation. In the late 1980's, female identified biological males (there is very little discussion in the literature of the time concerning female-to-male individuals) began challenging this assumption and rejecting the term *transvestite*. Additionally, the term *transsexual* did not adequately describe cross-gendered persons who were uninterested in altering their bodies through medical techniques and had no desire to pass as the opposite sex (Carroll et al., 2002). As a reaction to the perceived inadequacies of these labels, the term *transgender* came into prominence.

Sexual orientation and gender identity: GLB and T?

GLBT is an acronym that stands for *gay, lesbian, bisexual, and transgender*.

Although the tendency to include transgenderism with sexual orientation is quite common, sexual orientation and gender identity are two completely different attributes, not unlike age and race (Cook-Daniels, 1997). Most gay men feel like men and most lesbians feel like women. A homosexual man is not attracted to males because of some innate desire to be female, nor are lesbians attracted to women because of a hidden wish to be male. Non-transgendered homosexuals are comfortable with the sex they were assigned at birth and are simply attracted to individuals of the same sex. Transgendered individuals may be heterosexual, homosexual, bisexual, or asexual. However, caution must be used when applying these labels because the aforementioned categories of sexual orientation are all based on the two-sex/two-gender assumption. Consider, for example, a biological female who identifies/feels male and is attracted to females. Is this person a lesbian, or a straight man with a woman's body? The complexities of the issues at hand

become quite apparent.

Even though there is a definite distinction between gender identity and sexual orientation, there appears to be a tendency in much of the available literature to treat them interchangeably. For example, Mufioz-Plaza and Rounds (2002) conducted face-to-face interviews with 12 male and female participants in an effort to determine the types of social support systems available to GLBT high school students. These individuals were described as, "...18-21 years old, who identify as gay, lesbian, bisexual or transgender" (p. 52). The authors generalize their conclusions to GLBT adolescents. However, not one of the participants in the study was transgendered; transgendered youth were recruited but none chose to participate. The authors, however, continued to discuss their conclusions as if transgendered individuals had been represented in their sample, thereby implying that results from GLB students could be generalized to T. Another example is found in a report that compared the challenges of GLBT homeless adolescents with their *heterosexual* counterparts (Cochran, Stewart, Ginzler, & Cause, 2002). The sample consisted of what was described as 375 *sexual minority* adolescents, aged 13-21. Only one youth self-identified as transgender and yet the entire discussion proceeded to group 'T' in with 'GLB.' It is worthwhile to note the language used in this study. GLBT youths are described as *sexual minorities*, and compared to *heterosexual* adolescents. The implication/assumption appears to be that gender identity is intricately connected, if not actually synonymous, with sexual orientation.

One significant difference between the experiences of GLB and T individuals concerns the locus of conflict for the two groups (McQueen, 2006). Many gays, lesbians, and bisexuals come to realize that their conflicts are a result of society's homophobia and

heterosexism, not a result of their own homo/bisexuality per se (Friend, 1993). Hence, the source of conflict for the gay, lesbian, or bisexual is outside of the individual, resulting in an external locus of conflict. Transgendered individuals also experience the effects of homophobia and heterosexism (whether warranted or not). But unlike GLB people, transgendered individuals also experience a very personal, inner conflict: They feel they are in the wrong body. Even if prejudice were non-existent and society became completely accepting of gender dysphoric individuals, these people would still have to contend with the conflict of residing in a physical sex that was incongruent with their inner feelings. In this way, transgendered people experience both an external and an internal locus of conflict, and hence, are doubly affected (McQueen, 2006).

Etiological theories of transgenderism.

Traditionally, there have been two basic etiological theories on the subject of transgenderism: psychiatric/psychological and somatic/constitutional (Hird, 2002; McFalls, Gallagher, Halluska, & Prince, 2006). In brief, psychological/psychiatric theories of transgenderism hold that the gender dysphoric individual suffers from a mental disorder, that there is something wrong within the individual's psyche that prevents identification with the *correct* sex. Conversely, somatic theories argue that cross-gendered identification occurs as a response to a physical condition, as yet unidentified.

Historically, a number of psychological aspects of transgenderism have been explored. For example, Walinder (1969) explored the possible effects of parental age and birth order in the development of a transgendered identity. In a sample of 30 biological male and 13 biological female transsexuals, he found neither maternal nor paternal ages

differed from the average. Additionally, the transsexuals did not differ significantly from the expected birth order. Doorbar (1969) administered a battery of tests to 35 male-to-female transsexuals and found the distribution of IQ test scores as measured by the Wechsler Intelligence Scale differed significantly from the general population. More than half of the patients were found to have IQ scores in the Bright Normal Range (110-119), while there were six times as many as expected in the Superior Group (130+). On the Thematic Apperception Test, the individuals were highly verbal and very productive with a predominant emphasis on love and sex relations. In a study of the sexual behaviors of 25 male-to-female transsexuals, Pomeroy (1969) found considerable diversity in the reported sexual histories. In general, he described the group as, "...rather rigid, moralistic, isolated people with, usually, rather low rates of overt sexual behavior but a very great fantasy life which was compulsive and irreversible transsexual" (p. 188). Using multiple regression analysis on a sample of 25 male-to-female transsexuals, Johnson and Hunt (1990) found symptoms of introversion, depression, tension, and inability to adjust to work were predictive of androphilia (attraction to males), gynephilia (attraction to females), cross-gender fetishism, feminine gender identity in childhood, and age of onset of transsexualism. It should be noted that an obvious shortcoming of this study is the small sample size.

In contrast to psychological theories, somatic theorists hold that gender dysphoric men and women are not mentally ill but are simply responding to a biological condition. It is further hypothesized that much of the distress, anger, frustration and depression found in transgendered populations are the result of society's discrimination and not the transgendered condition per se. Also, no reliable evidence exists that these individuals

can be “cured” of their cross-gender feelings (Bradley & Zucker, 1997; Hird, 2002).

There is some scientific evidence available to support a somatic etiology. In a non-retrospective study of child and adolescent twins, Coolidge, Thed and Young (2002) found evidence of a strong heritable component to gender identity disorder and concluded that gender identity might be more a matter of biology than choice. A retrospective/follow-up study of subjects who had been prenatally exposed to the anticonvulsant drugs phenobarbital and phenytoin, yielded results that lend support to a somatic etiology (Dessens et al., 1999). Of the 243 exposed subjects born in the facility over a 15-year period, three transsexuals were found, which is purported to be a significantly higher incidence than is found in the general population. Additionally, considerably higher numbers of exposed subjects reported current or past cross-gender behavior and/or gender dysphoria than the control group. After controlling for age, sex, and mother’s age, it was concluded that the prenatal exposure to the anticonvulsant drugs might have been a factor in the transgender behavior found.

Zhou, Hofman, Gooren, and Swaab (1995) examined the brains of six male-to-female transsexuals and found a feminine looking brain structure in each of the brains. The bed nucleus of the stria terminalis (BSTc) is found in the hypothalamus of the brain, and is larger in men than in women. A female-sized BSTc was found in all of the MTF transsexual brains. It was determined that the size of the BSTc was not influenced by sex hormones in adulthood and was independent of sexual orientation. This suggests that gender identity may develop as a result of the interaction between the developing brain and sex hormones. Several issues with this interpretation need to be addressed. First is the small number of brains examined. Second, it should be noted that this study has never

been replicated. Third, it is important to note that we simply do not know enough about the brain to conclude that this structure is affecting gender identity. Finally is the issue of directionality. Whenever something new is learned, new neural pathways are formed which alter the physical structure of the brain. If a biological male states, “I feel female” and internalizes that sentiment, is it not possible that the brain will be changed in some way? In other words, it is equally plausible that the cross-gendered feelings are affecting the brain structure, not the brain structure causing the cross-gendered feelings. A study conducted to determine the age at which the BSTc becomes sexually dimorphic found the size difference in the BSTc did not become significant until around age 14 (Chung, Vries, & Swaab, 2002). The authors make a very brief reference to this question of directionality in the next to the last sentence of the article:

Alternatively, it must be taken into consideration that changes in BSTc volume in male-to-female transsexuals *may be the result of a failure to develop a male-like gender identity* (p. 1032, emphasis added).

Additional support for a somatic etiology can be found by looking at the occurrence of gender identity issues in the intersex population. Strictly speaking, a diagnosis of GID cannot be given to an intersexed individual because the DSM-IV criteria states that the gender disturbance must not be concurrent with a physical intersex condition (American Psychiatric Association, 2000). However, it has been reported that the occurrence of gender *dissatisfaction* within the intersex population is more frequent than with the general population-at-large (Lee et al., 2006).

Historically, theories that purport a somatic etiology have taken a backseat to psychiatric arguments (Hird, 2002; McFalls et al., 2006). In an attempt to assess the attitudes of psychiatrist concerning the nature and etiology of transsexualism, McFalls et

al. (2006) conducted a national survey of 94 psychiatrists. Support for each theory was gauged by assessing the opinions of the health care professionals surveyed. Attitudes were measured by a questionnaire that was mailed to a randomly selected sample of psychiatrists from the 15 largest United States cities. The questionnaire was sent to 400 doctors and returned by 94 for a 24% response rate. Although no attempt was made to recruit psychiatrists who specialized in gender identity disorder, the authors concluded that, "...it is likely that the psychiatrists who responded are those with the most interest in, and possibly, the most knowledge about the nature of transsexualism" (p. 28). It was found that the psychiatrists favored psychological/environmental etiological theories of transsexualism over somatic/constitutional ones.

Clearly, further study is needed before firm conclusions may be drawn.

Treatment

There are a variety of psychological approaches for treatment of GID, however, none have been evaluated under controlled conditions (Bradley & Zucker, 1997). There appear to be two categories of psychotherapeutic treatment: (a) those that attempt to "cure" gender dysphoric children of their cross-gender identity, defined by acceptance of their biological gender, and (b) those that attempt to help subjects accept themselves as they are.

Traditionally, recommended treatments have involved approaches to decrease cross-gender behavior. Coates (1992), a strong proponent of this type of *analytically oriented therapy*, emphasizes a strong focus on the family and various types of interventions aimed at enhancing same-sex identification. It is recommended that discouragement of cross-gender behavior be coupled with opportunities to develop same-

sex skills and friendships. Suggested activities for GID boys include more time with the father, leisure time with same-sex peers and participation in groups like the Boy Scouts.

Similar to Coates, Meyer-Bahlberg (2002) has developed a treatment protocol that attempts to rid young GID boys of their cross-gender identity. The justification for this treatment is based on the following premise: First, GID will continue into adolescence and adulthood transsexualism for only a small number of these boys. Second, GID boys often experience severe ostracism by peers and others, including family members. They also might show signs of depression and anxiety in early and middle childhood, and suicide ideation when older. Additionally, peer pressure and rejection due to the boys' continued feminine persona can increase the risk of dropping out from school. Since childhood GID in boys constitutes a risk factor for exposure to social pressures and adverse emotional consequences, it is purported that early treatment can speed up the fading of cross-gender identity (which typically happens anyway) and diminish the effect of the aforementioned problems.

Meyer-Bahlberg's treatment program has been designed for boys 4 – 6 years of age. A thorough assessment is conducted first, to establish if the boy meets the DSM criteria for GID; second, to assess the parents' understanding of the situation; third, to establish the degree or severity of the GID; and fourth, to identify factors contributing to the child's GID. The treatment has several specific goals: 1) to develop a positive relationship with the father or father figure; 2) to develop positive relationships with other boys; 3) to develop gender-typical skills and habits so that the boy will be able to fit into the male peer group or at least part of it; and 4) to feel good about being a boy. This involves quality time with the father, play time with same sex peers, teaching parents to

reinforce gender ‘appropriate’ behavior and ignore perceived cross-gender behaviors, and teaching other adults central to the boy’s life (e.g., grandmother or aunt) how to interact with the child to reinforce the desired behaviors. Meyer-Bahlburg reported on 11 boys who underwent this therapy and claimed success in 10 of the 11 cases.

Several issues with Meyer-Bahlburg’s report need to be addressed, starting with the rationale for this type of treatment. Consider the following statement: “In only a very small subgroup of such boys, will the GID continue into adolescence and adulthood (transsexualism)” (p. 361). There is no citation here to indicate that this statement is based upon empirical evidence. It is also implied that GID in adolescence or adulthood occurs only when one lives as the ‘opposite’ sex, whether by utilizing hormones and surgeries or not (which is the definition of transsexualism). In reality, however, there are other ways GID in adulthood can manifest besides living as the ‘opposite’ sex, as some transgendered individuals choose to not to live as the so-called ‘opposite’ sex, but rather to live transgendered. A more accurate statement would be that few GID boys grow up to live as women. That is a much different statement than one that implies that most GID boys outgrow their cross-gendered feelings. Is it not also possible that, rather than being “cured” of their GID, these boys simply learned to hide their cross-gendered feelings?

Meyer-Bahlburg even mentions this in a different context:

When they (parents) bring their child for evaluation, most parents of boys with GID have already started to interfere with their son’s cross-gender behavior. Parents usually resort to blunt critique and prohibition which, in our experience, may *make the child go underground and hide his cross-gender interests from view without genuinely changing his cross-gender identity* (p. 370, emphasis added).

Is it not possible this is exactly what is happening as a result of this therapy? Perhaps the

child has not actually let go of his cross-gender identity, but rather has simply learned not to talk about it or has even gone into denial. No mention is ever made of any long-term follow-up on these boys, and even if it were being done, it appears that the only criteria for success is an adolescent or adult who does not seek hormones or sex reassignment surgeries, or who does not live as a woman. Consistent with these reflections are the findings of Bradley and Zucker (1997), whose 10-year review of gender identity disorder was unable to find evidence of psychotherapy being able to significantly modify gender dysphoric children's cross-gendered feelings.

Physician/therapist Rosenberg (2002) is a proponent of therapy that facilitates self-acceptance in gender dysphoric children. Her experience indicates that attempting to force these children to accept their biological gender typically results in intensified gender dysphoria and associated symptoms. Her approach to treatment entails acceptance and support for the children just the way they are. This involves enhancing the self-esteem of the client and working directly to educate his/her family. She reports clinical improvement of mood, thought, school performance, and behavior. Interestingly, as subjects improve, they often come to identify with their biological genders, and abandon the wish to become the 'opposite' sex, without abandoning cross-gendered interests. She makes it clear to parents in the beginning that no attempt will be made to change gender identity. Many of her clients had previously been treated with conventional methods (e.g., spending more time with the same-sex parent, enrollment in gender appropriate activities, prohibition from cross-dressing or cross-gender activities) with no apparent relief.

Rosenberg also works closely with the family. She advises them that 80% of young people with GID end up being homosexual (Green, 1987) and explores the

family's feelings about having a gay child. Her work often entails helping fathers and, less often, mothers deal with their disappointment at having a feminine son or masculine daughter. She reports that while most parents have feared a transsexual outcome, they have been able to accept a homosexual outcome.

An obvious shortcoming with Rosenberg's report is that she is essentially reporting anecdotal information from her practice as a clinician. While such information is not without merit, it is not the same as conducting research under controlled conditions. Additionally, as in Meyer-Bahlburg's case, no long-term follow-up work is being reported on these children to assess lasting success.

Similar to Rosenberg's therapeutic approach, Carroll et al. (2002) suggest that clinicians who work with transgendered clientele need to adopt a *trans-positive* or *trans-affirmative* outlook to counseling. This entails counselors affirming transgendered people, advocating for political, social and economic rights for the transgendered, and educating others about transgendered issues.

Medical interventions.

It should once again be clarified that not all transgendered people choose to live as the so-called 'opposite' sex. Medical interventions are an option for transsexuals, which is only one manifestation of transgenderism.

Currently, medical intervention is never considered for pre-pubertal children (Cohen-Kettenis & van Goozen, 1997) If psychotherapy fails to end an adult's desire for sex reassignment, many treatment centers will eventually recommend sex reassignment procedures (Meyenburg, 1999; Rosenberg, 2002). What is to be done with a child who experiences a continued desire to physically transform to the opposite sex into

adolescence and adulthood? At what age is it considered safe to begin sex reassignment procedures?

Despite the typically early onset of gender dysphoria, most countries will not start sex reassignment surgery (SRS) procedures before the age of 18 or 21. Adolescence is seen as a time when many identities (e.g., religious, political) are developing. Many professionals are hesitant to instigate hormonal therapy and surgical procedures on an individual whose gender identity may not yet be fully developed. Consequently, it is often felt that the chance of making a wrong diagnosis and having post-operative regret is higher in adolescents than in adults (Cohen-Kettenis & van Goozen, 1997). After reviewing several case studies of adolescents who were seeking sex reassignment surgeries, Meyenburg (1999) found that most adolescents who exhibit clear-cut symptoms of transsexualism will eventually undergo SRS procedures. However, some will give up their desire for sex reassignment. This led him to conclude that sex reassignment must not be started before the client reaches 18 years of age.

The gender identity clinic at the University of Utrecht in The Netherlands follows a different philosophy (see Cohen-Kettenis & van Goozen, 1997). Here, it is argued that early treatment can alleviate much of the deep-rooted suffering that some transgendered adolescents experience. Unable to be open about their gender feelings, these adolescents often develop other problems, which may increase around the time of puberty. Knowing treatment may be many years away can exacerbate the feelings of hopelessness and may actually serve to stifle their social, intellectual, and psychological development. Another reason concerns appearance. Typically, early treatment yields better physical results than later treatment, especially in male-to-female individuals. If procedures begin before the

adolescent male's body has finished virilizing, then many of the secondary sex characteristics, such as deep voice and full beard, never fully develop. Lastly, it is concluded that late, rather than early, treatment is correlated with unfavorable post-operative outcomes. The gender identity clinic at the University of Utrecht will begin SRS procedures on adolescents who are at least 16 years of age. It is emphasized that careful considerations must be given to each adolescent seeking treatment and careful guidelines must be followed (Y. Smith, van Goozen, & Cohen-Kettenis, 2001). Three follow-up studies have reported positive results of early treatment (Cohen-Kettenis & van Goozen, 1997; Y. Smith, Cohen, & Cohen-Kettenis, 2002; Y. Smith et al., 2001).

Summary.

Was George Jorgensen a man or a woman? By all appearances, George was a man. His genitalia, gonads, internal organs, chromosomes, and hormone levels were those of a male. If the categories of man and woman are solely defined by anatomy, then indisputably, George was a man. However, should feelings count for anything? George never felt like a man, but rather firmly believed that he was truly, on some fundamental level, female. If Jorgensen was unquestionably male, why the incongruence? By appearances, Christine was a woman. She looked, acted, felt, and was perceived to be a female. Jorgensen reports having never been happy until able to live as a woman. Under these circumstances, is it accurate to categorize Jorgensen as a male? Did this individual truly 'change' sexes, and if so, at precisely what point in time did Jorgensen cease being male and begin existence as a female? Was it when hormone therapy took effect and the individual began being perceived as a woman, or perhaps was it the exact moment of castration?

Transgendered people provide yet another naturally occurring challenge to the two-sex/two-gender dichotomy and once again confront us with a group of people who do not readily fit our binary assumptions. After all, if sex and gender truly exist as a dichotomy, there is no place for a biological female who identifies as male.

ALTERNATIVES TO THE BINARY

In a fundamental way that transcends culture, language, and discourse, bodies appear to be male or female, with disparate reproductive anatomies that appear to divide the species into a straightforward dichotomy (Wilchins, 2004). From our hegemonic western perspective, this appears indisputable, an irreducible fact that is beyond debate (Kessler & McKenna, 1978). So resolute is our confidence in the two-gender paradigm we assume it to be relevant to all societies. However, unwavering conviction in the gender binary is not universal.

Ancient Greece

For thousands of years it was accepted among the Ancient Greeks that the human species consisted of one sex, male, which was divided into two genders (Laqueur, 1990). Rather than being viewed as separate from men, women were simply considered to be inferior males. The Greeks saw male and female genitalia as being identical, the only difference being that women's genitals were inverted or turned in. Professional anatomist, Galen of Pergamum (c. 130-200, as quoted in Laqueur, 1990) explained it as follows:

Think first, please, of the man's [external genitalia] turned in and extending inward between the rectum and the bladder. If this should happen, the scrotum would necessarily take the place of the uterus and the testes lying outside, next to it on either side...
...Think too, please, of ...the uterus turned outward and projecting. Would not the testes [ovaries] then necessarily be inside it? Would

it not contain them like a scrotum? Would not the neck [the cervix and vagina], hitherto concealed inside the perineum but now pendant, be made into the male member? (pp. 25-26)

It is not that the Ancient Greeks could see no differences between men and women, but rather that they saw more similarity than difference (Wilchins, 2004). Instead of being divided by their reproductive anatomies, the Greeks viewed the sexes as being linked by a common one.

Women's organs were inverted and considered inferior to men's, the implication being that women had all the right organs in exactly all the wrong places. In this fashion, sex was viewed not as a dichotomy, but rather as a hierarchy, with the superior male at the top and the inferior female below. Biology simply recorded the higher truth of male superiority. The superior male genitals provided a physical manifestation of the "reality" of women's lesser perfection (Laqueur, 1990). This is evidenced in a Galenian analogy of women and moles: Moles have eyes like any other animal, except that they do not open. Because mole's eyes do not work, they are an imperfect version of the real thing. Analogously, female genitalia were inverted, and hence, are an imperfect version of what they would be if they were *thrust out*. While the mole is a more perfect animal than one with no eyes at all, it is less perfect than any seeing animal. Similarly, women were seen as more perfect than other creatures, but their *unexpressed organs* served to illustrate how they were less perfect than men.

The work of Aristotle also provides clues of the ancient Greek perspective on sex and gender (Laqueur, 1990). Aristotle was not particularly interested in the anatomical differences between men and women, what we would think of as sex, but instead was more concerned with non-physical characteristics: males are active while females are

passive; men go out while women stay home. In our 21st century mindset, these kinds of characteristics constitute our notion of the social construction of gender, but for Aristotle, these were indisputable *facts*; these were *natural truths* that demonstrated the very essence of sexual difference. Aristotle's primary commitment was not with anatomy and when confronted with the question of anatomical differences between the sexes, he fell into an explanation very similar to Galen's, with a tendency to regard the cervix and vagina as an internal penis.

For the ancient Greeks, the human experience was one of one sex and two genders, which is quite a radical departure from the modern day assumption of the sex/gender binary.

Native American Culture

In 1833, fur trader Edwin T. Denig began living in Montana with the Crow Indians, ultimately spending 23 years among them (Roscoe, 2000). Of all the differences he experienced in native practices, he found the Crow's acceptance of gender variant people to be the most disturbing:

Most civilized communities recognize but two genders, the masculine and feminine. But strange to say, these people have a neuter... Strange country this, where males assume the dress and perform the duties of females, while women turn men and mate with their own sex! (Denig as cited in Roscoe, 2000, p. 3)

Denig's was not a new discovery, as Europeans had been documenting encounters with the alternative gendered since the Spanish conquest (Roscoe, 2000). Anthropologists use the term, *berdache*, to describe these gender variant individuals.

At one time, there were an estimated 400 different Native American tribes throughout North America (Roscoe, 2000). They ranged from egalitarian, loosely

organized hunters and gatherers to bands of farmers and villagers organized by strict social order and ruled by tribal chiefs. Other tribes combined hunting and gathering with agricultural endeavors. Throughout all of these disparate native societies, alternative gender roles were among the most widely shared features. Biologically male berdaches have been documented in over 155 tribes. In approximately one-third of those tribes, a formal status existed for female berdaches as well. Sometimes female berdaches were referred to with the same term used for male berdaches and sometimes they had their own distinct term. Consequently, the terms *third-* and *fourth-gender* have been used to describe male and female berdaches respectively.

Many North American Native cultures were either disbanded or disappeared before they could be studied, so the absolute frequency of these alternative genders is unknown. However, the acceptance of berdaches has been documented in tribes in every region of the continent, in every kind of society, and among speakers of every major Native American language (M. J. Clark, 1994; Roscoe, 2000). In fact, the number of tribes documented that did not allow a place for this type of gender diversity are quite few.

Although many variations in berdache roles have been noted, there was a core set of traits shared throughout the native tribes (Roscoe, 2000). It appears that both male and female berdaches tended to prefer the work and activities traditionally reserved for the so-called 'opposite' sex. Berdaches were distinguished from men and women by temperament, dress, lifestyle, and social roles. It was often believed that berdache identity resulted from some kind of supernatural intervention, typically in the form of visions or dreams and was sometimes sanctioned by tribal mythology. They were frequently

assumed to have spiritual powers. Berdaches most commonly formed sexual and emotional relationships with non-berdache members of their own biological sex, although relationships with the opposite sex have been documented as well. In fact, the only sexual relationships never recorded were berdaches pairing with other berdaches.

As the original inhabitants of North America were not threatened by gender variance, berdaches were accepted and integrated members of their communities (Roscoe, 2000). In some tribes berdache status commanded special respect and privileges. There are a few recorded instances where berdaches were feared because of their alleged supernatural powers. In the small number of documented cases where a berdache was scorned or rejected, it was usually for personal reasons and not because of his/her gender variance per se.

The berdache gender was seen as separate from the categories of male and female and was not judged to be deviant. These were not *failed* men or women. Berdache status was viewed neither as a mixture of the two sexes, nor as a midpoint on a continuum. Neither was it an alternative for nontraditional individuals who were still considered men and women. Rather, berdache was considered a separate gender within a multiple, non-binary gender system (Blackwood, 1988). Thus, to say the berdache lived as the ‘opposite’ gender is both reductionistic and inaccurate (Roscoe, 2000).

While the most visible marker of berdache status was some form of cross-dressing, it occurred less frequently than is typically assumed. In some tribes, male berdaches dressed differently than both men and women; in others, they did not cross-dress at all. Female berdache attire was even more variable with some wearing male clothing only during hunting or when in battle. In terms of labor, they often engaged in

some combination of men's and women's activities along with endeavors unique to the berdache status, contrary to the typically held assertion that they did the work of the so-called 'opposite' sex exclusively (Roscoe, 2000).

Summary

The ancient Greeks' consideration of sex and gender and the North American non-binary gender systems have provided an area of study for both historians and anthropologists. The very existence of alternative gender schemes suggest that the modern day two-gender/two-sex paradigm is not inevitable (Fausto-Sterling, 2000).

SOCIETY'S COMMITMENT TO THE SEX/GENDER BINARY

Modern day Western society remains very committed to the two-sex/two-gender paradigm, evidenced in part by the stringent, socially constructed rules and regulations that exist to define precisely what it means to be male or female. Sanctions, sometimes severe, are meted out to those who violate gender expectations as can be found in the phenomenon of violence against those who challenge traditional gender boundaries.

Violence

The most frequently reported reason for committing violence against perceived homosexuals relates to adherence to traditional gender roles (Harry, 1990). Gays are judged to be guilty of violating socially sanctioned gender roles and perpetrators often rationalize their actions by seeing gay people as being worthy of punishment. In this setting, attackers actually see themselves as rendering gender justice and reaffirming the natural order (Herek, 1992a). The majority of perpetrators of anti-gay violence are late adolescent males who are strangers to the victim. They tend to attack in groups and are not motivated by robbery for profit (Berk, Boyd, & Hamner, 1992; Harry, 1990). Matza

(1964) speaks of a condition of *situation of company* (pp. 50-64) present in these adolescent male groups where a constant, mutual pressure to prove their commitment to the male gender role is present, resulting in *masculinity anxiety*. Attacking those who do not fit their definition of an appropriate male is viewed as one way to prove their maleness (Harry, 1990). The commitment to the binary is quite apparent here. Rather than facing the possibility of having one's membership in the male category challenged, these adolescents are willing to attack another human being and ultimately risk injury and prosecution.

Whereas homosexuals are seen to be pushing gender boundaries by being sexual with a person of the same sex, the transgendered are seen as throwing the two-gender paradigm out the window. Violence, harassment, and terror often follow. Physical attacks against those that do not conform to traditional gender roles illustrate the intense hostility, condemnation and disgust toward transgendered and homosexual persons present in today's society, in effect, punishing the victim for daring to be visible (Herek, 1992a).

Herek (1992b) posits the existence of a broadly established and pervasive *heterosexism* that undergirds the homophobia driving such attacks. He defined heterosexism as "...an ideological system that denies, denigrates, and stigmatizes any nonheterosexual form of behavior, identity, relationship, or community" (p. 89). Similar to racism, sexism, and other systematic forms of oppression, heterosexism is perpetrated in both societal customs and institutions, as well as in individual attitudes and behaviors. The belief that everyone is, or at least should be, heterosexual feeds the rampant homophobia present in today's society. Similarly, there exists a *gender dichotomism* (McQueen, 2006). Like heterosexism, gender dichotomism reflects the belief that

everyone is born unambiguously male or female and anyone not fitting the dichotomy is seriously flawed. By failing to acknowledge the existence, let alone the normalcy of alternatively gendered individuals, the hegemony of the gender dichotomist ideology is allowed to flourish.

Public Response

When faced with substantial numbers of people who either physically do not fit the binary (i.e., the intersexed) or psychologically do not fit (i.e., the transgendered), great lengths are taken to rationalize our dichotomous belief system. In an article concerning intersexuality, Fausto-Sterling (1993b) suggested a five-sex system over the current dichotomy. The article was subsequently reprinted on the Op-Ed page of the *New York Times* (Fausto-Sterling, 1993a). Her five-sex system included the usual categories of male and female, plus three additional: *Herms*, indicating true hermaphrodites, *merms*, for male pseudo-hermaphrodites, and *ferms*, for female pseudo-hermaphrodites. By her own admission, she was writing tongue-in-cheek as an attempt to be provocative (Fausto-Sterling, 2000). Indeed, the very idea of a non-binary sex system unleashed a controversy. Religious groups connected her five-sex model to the upcoming United Nations sponsored 4th World Conference on Women that was to be held in Beijing two years later, apparently sensing some kind of conspiracy. The Catholic League for Religious and Civil Rights responded by taking out an advertisement in the *New York Times*, which in part stated, “It is maddening to listen to discussions of ‘five genders’ when every sane person knows there are but two sexes, both of which are rooted in nature” (as quoted in Fausto-Sterling, 2000, p. 78). Syndicated columnist E. Thomas McClanahan responded by writing, “What the heck, why settle for five genders? Why not

press for an even dozen?” (McClanahan as cited in Fausto-Sterling, 2000).

In response to the U.N.’s 1995 Beijing Conference on Women, then presidential candidate, Pat Buchanan entered the binary dialogue:

They started with heterosexual; I followed them there. They went on to homosexual; I was slowing down. They said transsexual; that’s the third one. I don’t understand the last two. I tell you this: God created man and woman—I don’t care what Bella Abzug says (Agenda, p. 11).

Columnist Marilyn vos Savant is listed in the *Guinness Book of World Records* Hall of Fame for “Highest IQ.” When asked for her thoughts on an alternative, non-binary system of gender, she replied in part as follows:

...There are also people whose chromosomal makeup is somewhere between male (XY) and female (XX). ...There are even XYs who are apparently females, and XXs who are apparently males.

In my opinion, there are men and there are women—no matter how they’re constructed...and that’s that. I can’t imagine why anyone would campaign for more sexes. Just *two* has given us more than enough trouble (vos Savant, 1996, p. 6, emphasis in the original).

Recently, Pope Benedict XVI weighed in on the ongoing debate concerning gay marriage. His argument against allowing homosexuals the right to marry is grounded in gender dichotomism: “...those ruinous theories that strip all relevance from the *masculinity and femininity of the human spirit*” (Reuters, 2007, emphasis added). The argument is not against homosexuality per se, but rather in the alleged threat that gay marriage would bring to the dichotomy.

Medical Response to Intersexuality

An examination of modern medicine’s response to intersexuality further serves to illustrate society’s commitment to the dichotomous notion of sex and gender. The birth of

an intersex child is treated as a medical emergency even in cases where there is no immediate threat to the health of the child (Crouch, 1998; Dreger, 1999a; Fausto Sterling, 2000; Izquierdo & Glassberg, 1993; Kessler, 1998; Parker, 1998; Winterer et al., 1986). Immediately following the birth of an intersex baby, a team of medical doctors is formed, typically consisting of the original doctor (obstetrician or pediatrician), a pediatric endocrinologist, a pediatric surgeon (urologist or gynecologist), a geneticist, and sometimes a psychologist (Kessler, 1998; Russo, 1983). A precise diagnosis of the intersexed infant is achieved through physical examinations and a battery of laboratory tests. Consideration is given to the location of the gonads, the *adequacy* of the phallus, the size and location of a vaginal cavity (if present), the presence of a uterus or prostate gland, and the internal pelvic organs. Laboratory tests are performed to determine the specific genotype and chromosomal makeup of the infant (Newman, 1992). If a child does not possess a Y chromosome, the female gender is assigned. The clitoris is typically surgically reduced if it measures longer than one centimeter when stretched at birth. (Note there is an accepted standard for clitoral length but not for penile length.) Surgery will be recommended at a later time if the vagina is absent or is deemed insufficient for penile penetration. If necessary, hormone treatments will be utilized to ensure the development of secondary female characteristics such as breast development (Dreger, 1999a). If, on the other hand, the child is determined to have at least one Y chromosome, then additional tests are performed to determine whether or not the phallic structure will respond to treatment and/or eventually grow to an adequate size. If it is determined the penis will remain inadequate, genital surgery is performed to amputate the penis and the child will be raised a girl (Castro-Magana et al., 1984; Hausman, 2000; Kessler, 1998;

Newman, 1992). Over a 25-year period, 91 intersexed children received surgical treatment for various intersex conditions from the Departments of Surgery and Pediatrics, Children's National Medical Center and George Washington University Medical School, Washington, DC. Of those, 79 were assigned the female sex (Newman, 1992). The ultimate goal of these medical protocols is to produce physically correct boys or girls who will develop into well-adjusted (i.e., happy and behaviorally unambiguous) heterosexual adults (Dreger, 1999a).

The American Academy of Pediatrics (2000) refers to the birth of an intersex child as a *social emergency*, rather than a true medical emergency. This sense of urgency appears to exist for two reasons. First, it is generally believed that quick, decisive action will result in decreased stress on the parents as it is assumed the parents will have a negative view of a baby with ambiguous genitalia (Kessler, 1998), and that they will have trouble bonding with a child that is not clearly male or female (Newman, 1992). By quickly assigning a gender and performing surgery to make the child's body congruent with that gender, it is assumed the parents will be more able to bond with their child. Secondly, it is believed that allowing these children to discover their dissimilarities would result in emotional scarring and possibly gender identity problems (Kessler, 1998; Money & Ehrhardt, 1972). Medical professionals have been urged to forgo terms like testes and ovaries for more ambiguous nomenclature like *sex glands*. It is also recommended that genitalia not be referred to in the negative, as in *not male* or *not female*, but rather, as *unfinished* genitals (Russo, 1983).

Until very recently, it was not unusual for parents to be kept unaware of the details of the child's condition and the specifics of various treatments (Dreger, 1999a;

Fausto-Sterling 2000; Kessler, 1998). In fact, physicians were often instructed in medical school to withhold such information. More often than not, parents were urged to keep the child's condition a secret from extended families and friends, and later, from the child (Dreger, 1999a; Fausto Sterling, 2000; Kessler, 1998). Slijper et al (1994) reported that their experience as intersex managers had shown that parents who confided their grief to acquaintances typically regretted it later on. This policy of non-disclosure has recently been denounced by the American Academy of Pediatrics who now consider open communication with the parents and family to be essential and even advocate for familial participation in all decision making (Lee et al., 2006).

Crouch (1998) discusses the system of gender assignment as being based on an implied belief that the appearance of the child's genitals is the most influential factor of gender identity formation. The argument is that typical-looking genitals will allow these children to develop the gender identity appropriate to their assigned sex and prevent them from feeling different from their peers which in turn will prevent damage to their self-esteem. Castro-Magana et al. (1984) argue that the most serious mistake is to allow a child to be assigned a male gender who will not have an adequate penis. Newman et al. (1992) proposes that failure to assign infants with inadequate penises to the female sex is *heartbreaking* and that these infants will be *doomed* to life as a male without a penis (p. 650).

Many adult intersexuals who have been through the medical system of treatment are challenging the efficacy of the current medical management (Dreger, 1999b; Kessler, 1998). There have been a number of advocacy and support groups develop throughout the world, including the United States, Canada, Europe, Asia, Australia, Japan, and New

Zealand. Among them are the Intersex Society of North America (ISNA), Germany's Genital Mutilation Survivor's Support Network and Workgroup on Violence in Pediatrics and Gynecology, and The Androgen-Insensitivity Syndrome and Support Group in England. Although differences do exist within these organizations, the vast majority of the members are critical of the way their conditions have been handled by the medical community (Kessler, 1998). These adult intersexuals argue the current system of medical management is causing the very things it is supposed to prevent. They claim, for example, that the historic lack of communication between physician, parents, and child along with the encouraged environment of silence, only added to the feelings of shame and embarrassment. Groveman (1999) reports having experienced an adolescence filled with shame, due in part to the lack of communication from her doctors and being forced to display her genitals for inspection by medical students and interns. Devore (1998) describes undergoing 16 genital surgeries—10 by the age of 10—with at least 12 of the surgeries done with the explicit goal of making him able to urinate standing. He was unaware that other children existed with similar conditions and reports that the doctors never answered his questions. He describes being a very withdrawn, depressed and suicidal child as a result of the imposed privacy. As an adult, he reported having decreased erotic sensitivity, which he attributed to the multiple surgeries, and being unable to urinate standing. The adults also question the rationale behind the gender assignment decisions and the subsequent surgeries by maintaining that the numerous genital surgeries they underwent to normalize the appearance of their genitals are not effective and they ultimately ended up with atypical looking genitalia (Dreger, 1999; Kessler, 2000). In general, the adults argue that the goal of producing a physically

correct, well-adjusted boy or girl is simply not being realized. Clinicians Wilson and Reiner (1998) argue that the current management system lacks empirical support, is fundamentally unsound and that it contradicts the medical principle *first do no harm*.

There are recent signs that indicate the medical profession is beginning to rethink some of its past practices. For example, new guidelines for dealing with intersexuality have suggested that the emphasis of treatment should be on the ‘functioning’ of the genitals, rather than on cosmetic appearance (Lee et al., 2006). It is stated that it is generally believed that surgery performed for cosmetic reasons in the first 12 months of life will relieve parental distress and improve attachment between the child and the parents, although it is acknowledged that evidence for this belief is lacking. The aforementioned policy change on disclosure of information to the parents and encouragement of parental involvement in decision-making also signals a shift in philosophy. Even with these changes, however, the current medical management of the intersexed continues to illustrate the medical profession’s commitment to the gender binary by implying that inside every intersexed child is a true sex trying to emerge, and that sex is binary (Fausto-Sterling, 2000). Perhaps if the medical society were to eschew its current adherence to the sex/gender dichotomy and instead institute an aggressive campaign to educate the public about the existence of sexually ambiguous people and encourage their acceptance, intersexed people might be allowed to exist in society as they are, making the need for hormone therapies, surgeries, and secrecy obsolete. Instead, modern medical practice chooses to disallow the possibility of a mixed-sex individual, provides us no non-binary options, and thereby refuses to recognize the most obvious facts of the intersex bodies before it. Wilchins (2004) calls this a deliberate *non-knowing*.

Medical Response to Transgenderism

Currently, transgenderism is considered a mental disorder, evidenced by its inclusion in the Diagnostic and Statistical Manuals of the American Psychiatric Association. Instead of accepting cross-gendered identification as a legitimate identity, it is assumed that transgendered people are flawed individuals, failed men and women who refuse to take their rightful places in the gender dichotomy.

The third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1980) was the first to include psychiatric diagnoses pertaining to gender dysphoria: *gender identity disorder of childhood (GIDC)* and *transsexualism*, which was used to diagnose adolescents and adults. A third diagnosis was added to the DSM-III-R: *gender identity disorder of adolescence and adulthood, nontranssexual type (GIDAANT)* (American Psychiatric Association, 1987). The current DSM-IV-TR (American Psychiatric Association, 2000) diagnoses gender dysphoric individuals as having *gender identity disorder (GID)*, with the particular diagnosis depending on the age of the individual: *gender identity disorder of childhood (302.6)* or *gender identity disorder of adolescence or adulthood (302.85)*. For those individuals who do not meet the criteria of the aforementioned diagnoses, *gender identity disorder not otherwise specified (GIDNOS) (302.6)* is available (see Appendix B).

The DSM's inclusion of gender identity disorder is not without controversy (Zucker & Spitzer, 2005). Barlett et al. (2000) explored whether gender identity disorder in children meets the DSM-IV criteria of a mental disorder. The authors compared the DSM-IV's four diagnostic criteria for GID in children with its definition of mental disorder (see Appendix C). They begin with the history of the mental disorder definition.

The DSM-III was the first edition of the DSM to include an official definition of mental disorder. Spitzer and Endicott (1978) suggested that the need for a definition grew out of the consideration of whether to remove homosexuality from the psychiatric jargon. The debate about whether or not homosexuality in and of itself was evidence of a mental disorder led the authors of the DSM-III to create an explicit set of guidelines for establishing which conditions should be included and how those conditions should be defined.

Bartlett et al. found several problems with the DSM-IV's GID classifications. First, Criterion A deals with a *strong and persistent cross-gender identification*, identified by the child exhibiting at least four out of five very disparate symptoms, which are treated as equivalent indicators. For example, having a preference for other-sex playmates is equivalent to having a stated desire to be the 'opposite' sex. Furthermore, since it is only necessary to meet four of the five criteria, it is possible for Criterion A to be met without the child stating he or she wants to be the 'opposite' sex. However, the DSM specifies that to make a diagnosis of GID: "There must be evidence of a strong and persistent cross gender identification, which is the desire to be, or the insistence that one is, of the other sex" (p. 532).

The result is that a diagnosis of a mental disorder can be achieved in the absence of a core feature of that disorder. Secondly, Bartlett et al. identified a confusion of the concepts of sex and gender in the items in Criterion B. Discomfort with one's biological sex and discomfort with the gender roles ascribed to one's gender are equated in this category even though they are very disparate phenomena. Considering one's genitals as disgusting is given the same diagnostic weight as having a preference for particular play

or clothing style. At best, this is arguable. Here again, it is possible to render a diagnosis of GID with no evidence that a child is uncomfortable with his/her biological sex. Criterion D states that the disturbance *causes* distress or impairment, yet there is no mention of causation implied in the general definition of mental disorder. This inconsistency leads to an important question: Is a child's distress derived from the condition of being gender dysphoric per se, or can it be associated with indirect means such as social ostracism? According to the authors, children are typically not referred for clinical evaluation because of distress, but rather are usually referred because of parents' or teachers' concern about the child's cross-gender interests or because the parents want to prevent homosexuality in the child. These issues, and others, led the authors to conclude that the diagnostic category of GID in children as it currently exists should not appear in future editions of the DSM. They maintained that the existence of two populations of these children cannot be ruled out: those that are not comfortable with their biological sex and those that are. Specifically, they conclude that children whose discomfort lies only with the gender role of their sex, not with their anatomies, should not be considered to have a disorder. Additionally, they state there are too many problems with the DSM-IV diagnostic criteria to determine if children who are uncomfortable with their biological sex should be diagnosed with a disorder or not and that further study is indicated.

The inclusion of cross-dressing as a condition of transgenderism warrants discussion. As previously discussed, gender identity disorder is defined as a *strong and persistent cross-gender identification* (American Psychiatric Association, 2000). The vast majority of cross-dressers are heterosexual males (Dzelmé & Jones, 2001; Stoller, 1985)

who do not identify as female. Cross-dressing is a behavior that transgresses societal gender expectations, not an intrinsic identification with the so-called 'opposite' sex. As such, cross-dressing does not meet the DSMs minimum requirement for classification as a type of gender identity disorder.

In general, the refusal to allow the possibility that so-called cross-gendered feelings might be a legitimate way of being further illustrates the general commitment to the gender binary present in today's society.

Summary

In a previous section, a distinction was made between sex, the biologically determined, and gender, the socially constructed. In contrast, Fausto-Sterling (2000) maintains that even the biological notion of sex is a social decision. In the context of intersexuality, the determination of whether a child should be raised as a boy or girl and which surgical and hormonal treatments will be administered is subject to a number of social considerations. Consider the following examples: Should a boy with an atypically small penis be allowed to be a boy, or is it better to amputate his penis and raise him as a girl? When confronted with a clitoris that is larger and more penile in appearance than the statistical norm, which is more important: sexual sensitivity or a genital appearance that better resembles the common type? If a boy has an ovary, is it still an ovary and is the boy really a boy? These are social considerations, independent of anatomy and biology, and they play into our decisions of biological sex.

The decision of male or female is not the sole property of the medical and psychological professions. Most encounters we have with other another humans being involve a decision about the sex of that person and the decisions we reach are shaped by

societal influences above and beyond simple biology.

THE CONCEPT OF ATTITUDE

The concept of *attitude* is perhaps one of the oldest, most frequently referenced, and most indispensable found within the study of social and psychological processes (Allport, 1935, 1966). Originally, the term *attitude* was used exclusively as a descriptor for physical posture. For example, saying someone had adopted ‘a threatening attitude’ referred to his/her physical stance. Although it can still refer to physical positioning, more often than not the term now connotes the psychological or mental state (i.e., the *psychological* posture) rather than bodily stance (Jahoda & Warren, 1966). The term is certainly not the sole property of the behavioral sciences, as it is common to everyday usage.

Attitude is an abstract concept that has been defined in multiple ways. The successful construction of a reliable and valid measure of attitudes toward the atypically gendered requires a clear understanding of this highly complex construct.

Defining Attitude

Attitude has been considered one of the most important constructs in both sociology and psychology (Allport, 1935, 1966; Doob, 1947; Murphy, Murphy, & Newcomb, 1937). Murphy, Murphy, and Newcome (1937) posit that, “Perhaps no single concept within the whole realm of social psychology occupies a more nearly central position than that of attitudes” (p. 889). In the early part of the 20th century, Thomas and Znaniecki (1918) actually defined social psychology as the scientific study of attitudes. In reference to defining the attitude construct, Chein (1948) stated that, “At stake is not the definition of a word, but the definition of a whole area of psychological inquiry” (p. 187).

Allport (1935, 1966) discussed the uniqueness of the attitude construct by noting that, for the most part, it had managed to escape the nature vs. nurture controversy that was much in vogue at the time of his writing because it combined both instinct (nature) and habit (nurture). He additionally noted that it was a broad enough construct to apply to either single individuals in the form of personally held attitudes, or to broad patterns of cultures as in societal attitudes. Accordingly, it has been found to be a useful construct to both psychologists and sociologists.

Attitude has been defined in multiple ways. Sherif and Cantril (1945) defined it as one of the components of the psychological make-up that determines individuals' selective and characteristic reactions in relation to certain specific stimulus situations. The authors are quick to point out that other psychological components also result in selective and characteristic actions, for example, when hunger results in eating. As such, attitudes are but one of a number of psychological factors that determine a person's reaction to his/her environment.

One feature that appears to be common to all definitions is the notion that attitude is a *functional state of readiness*, an alertness that determines how individuals will react when presented with certain stimuli or stimulus situations (Allport, 1935; Sherif & Cantril, 1945). An attitude is a posturing of the mind that will ultimately influence reaction. This psychological state of readiness is often referred to as 'set' (Sherif & Cantril, 1945), as in, ready, *set*, go. A perusal of some of the existing definitions illustrates this essential feature of the construct. For example, it has been defined as, "an implicit, drive-producing response considered socially significant in the individual's society" (Doob, 1947 p. 136); as primarily being set toward or against certain things

(Murphy & Murphy, 1931); as the specific mental disposition toward an incoming experience, or as a condition of readiness for a type of activity (Warren, 1934); a readiness for attention or action of a definite source (Baldwin, 1901); a mental disposition of the human individual to act for or against a definite object (Droba, 1933); a more or less permanent, enduring state of readiness of mental organization which predisposes an individual to act in a characteristic way (Cantril, 1934); and an organization of beliefs around an object or situation that predisposes an individual to respond in some preferential manner (Rokeach, 1968). After reviewing several definitions of attitude, Allport (1935) concluded that the fundamental trait of attitude was a *preparation* or *readiness* to respond. This functional state of readiness is fundamental to his own definition of attitude:

An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related (p. 810).

Noting that not all states of readiness are attitudes, Sherif and Cantril (1945) provide five concrete criteria that determine which cases of readiness constitute attitudes. These are discussed below and applied to the topic of attitudes toward the atypically gendered when appropriate.

1. *Attitude always implies a subject-object relationship in that attitudes are always related to specific stimuli or stimulus situations.* These may include *objects* (e.g., home, car, restaurant), *persons* (self, parent, partner, spouse, rival), *groups of people* (one's cohort, an ethnic group), *institutions* (church, the government, school), and socially established and standardized *concepts, values, or norms* (the flag, the constitution, democracy). Examples of the atypically gendered can be found throughout

these types of subject-object relationships. For example, attitudes can be held toward one, specific atypically gendered person (*I like my neighbor, who is transgendered*) or toward an entire group (*I think transsexuals are sick*). Institutions can influence attitudes toward the atypically gendered (*I am a Christian and my church teaches that God created us as either man or woman. Therefore, sexual reassignment procedures are morally wrong*). Although it is currently under debate, the institution of marriage is still defined as something that occurs only between one man and one woman, which ultimately leaves out the atypically gendered. Perhaps concepts, values, and norms have the most extreme, far-reaching influence. As previously discussed, our society remains very committed to the concept of the dichotomy. The mutually exclusive and collectively exhaustive categories of man and woman are viewed not just as a norm, but as an absolute truth.

2. *Attitudes are formed*; they are not innate or biologically given. They are not even necessarily the result of motivational forces. Consider that any food will satisfy hunger, yet we carry different attitudes toward different foods. Developing an attitude toward a particular food requires that we first experience the food. If we term that experience *bitter*, we may well walk away with a negative attitude toward that particular food. On the other hand, many social attitudes can be formed when children hear the verbal judgments of adults. For example, whenever a young boy is told to, "...stop being a sissy," or a young girl is instructed to, "...act like a lady," the dichotomous paradigm is reinforced and the foundation is laid for the development of negative attitudes toward the atypically gendered.

3. *Attitudes have affective properties that vary in intensity*. Social attitudes are formed in relation to social values or norms, which in essence are standardized affective

fixations. Typically, they are verbalized, shortcut value judgments, such as *the home is a sacred institution*. Here, the individual is conditioned to respect and uphold the values of the group of which he or she is a member or would-be member. Membership and participation mandates certain standardized values or practices as sacred. As a result, the attitudes an individual forms due to group membership become affectively charged. There are certainly numerous groups that support the binary. Many organized religious groups, the military, and the government, to name but a few, perpetuate the hegemony of the gender dichotomist ideology. But on an even larger scale, society has been defined as binary. As a result, the gender dichotomy has become canonized.

4. *Attitudes are enduring states of readiness.* Some states of readiness are more or less momentary, depending on both the state of the individual and the current situation. When in a state of sexual tension, one might passionately couple with another who is never looked at again once the tension has been satiated. Here, the state of readiness dissolved once satiation was achieved. This is not the case with attitudes, which are more or less a perpetual state of readiness. For example, a very much-preferred food might still be met with excitement even though the individual is not hungry. Once formed, attitudes are more or less enduring states of readiness independent of the momentary state of the individual. Consider the following: *Some things, like a man in a dress, are always wrong.* The inner feelings, struggles, and turmoil of the man who feels it necessary to cross traditional gender norms of attire do not mediate the existing attitude. This is not to say that attitudes cannot be changed, but rather that while they are in place, they are more or less enduring.

5. *Attitudes range in the number and variety of stimuli to which they are referred.*

The extent, or range, of a stimulus to which an individual relates an attitude will vary depending on the source of the attitude and the relationship between the attitude and the stimulus confronted. Some attitudes are only evoked by the situation under which they originally developed. Typically, however, the attitude is related to a variety of stimuli or stimulus situations that were not necessarily part of the experience that originally established the attitude. Consequently, an attitude may have a direct effect in a very specific situation, or it may reveal itself in a variety of ways. Typically, gender dichotomism does not manifest in only one specific type of situation, but rather to almost any kind of gender transgression.

Attitude and related constructs

There exists throughout the social science literature a plethora of terms used to describe the various human psychological assessments of reality (Campbell, 1966; Cooper & McGaugh, 1966; Meddin, 1975; Rokeach, 1968) including attitude, belief, values, bias, prejudice, judgment, norms, sentiments, value-orientations, and opinion, to name but a few. These types of terms have been collectively referred to as *subjective outlook terminology* (Meddin, 1975). Unfortunately, there is no universal agreement on the meaning of these terms and they are often defined quite loosely, if at all, which often makes it difficult to distinguish between them.

In an effort to alleviate some of the conceptual confusion surrounding these terms, Meddin (1975) proposed a system of classification that he felt could be applied to all of the social sciences. His theory is that essentially, the three themes of *hierarchy*, *tripartite division*, and *normative-appetitive struggle* are found throughout all of the behavioral sciences and philosophy and that the simultaneous application of these themes will yield

a consistent and systematic taxonomy of these constructs. In this fashion, he used these themes as parameters of an inclusive classification system that would ultimately maximize classificatory potential.

Meddin found the concepts of values and attitudes to be linked within a hierarchy in that attitudes are considered to be more specific than values. Attitudes are directed toward relatively concrete referents or objects in the environment while values are concerned with more abstract referents or classes of objects. Often, the referents of both are concerned with the same content area, in which case attitudes are linked to values in that one value can serve as an organizing theme for a number of attitudes. In this context, attitudes are specific expressions of a more general value, and as such, values and attitudes can be seen to exist as the polar ends of a continuum that moves from the highly abstract to the very specific. Accordingly, adherence to the sex/gender binary would be seen as a value, while feelings concerning the specific behavior of cross-dressing, for example, would be regarded as an attitude.

Use of the hierarchical concept allows distinctions to be made between types of attitudes and types of values. General attitudes deal with broad but tangible referents, while specific attitudes focus on narrow referents. For example, one may hold an attitude toward transsexuals in general which may differ toward the specific attitude held toward an acquaintance that happens to be transsexual (e.g., While I firmly believe that anyone who has a sex change operation is profoundly disturbed, I just found out that the man who lives next door to me used to be a woman and I've always liked him). Highly specific attitudes are referred to as *opinions*. It can be seen that the hierarchical concept allows for important distinctions to be made between levels of attitudes.

Similar distinctions can be made at the value end of the continuum as well. Although all values deal with abstract referents, some are more abstract than others, which allows for additional classification. To Meddin, the term *values-orientation* best represented the most abstract values. As such, they can be viewed as being located at the furthest point on the continuum opposite opinions.

The tripartite division holds that outlook terms are comprised of three subcomponents: *cognition*, *affect*, and *conation*. An oversimplification of the tripartite division could be conceived of as *thinking*, *feeling*, and, *willing*. Cognition refers to thought processes. When confronted with an object in the environment, we perceive the object and respond in an adaptive fashion. Definitions of *belief*, for example, almost all refer to intellectual functioning. Typically, the existential or factual nature of the cognition is coupled with evaluation. For example, it is a ‘fact’ that transgendered people exist in the world, but the response to this population does not just consider this ‘fact;’ it also places an evaluative property as well, e.g., unnatural, bad, sick, disordered. Questions of evaluation are a matter of feeling (i.e., affect) as well as belief (i.e., cognition), which brings us to the second component of the tripartite, *affect*. This refers to the emotional side of life. The outlook term, *sentiment*, typically refers specifically to a human affect. The third dimension of the tripartite has been termed *conation* and refers to the tendency to act. The conative aspect of personality is characterized by both purposive behavior and the impulse to act. Meddin makes the point that the tendency to act is not the same thing as the act itself. After all, human behavior does not include every impulsive action tendency that enters an individual’s mind. Action is typically the result of an assessment process that involves both the environment and numerous outlook

constellations. There is rarely a simple correspondence between a particular impulse to act and an actual action. For example, one might believe that all transsexuals are worthy of being beaten, but may choose not to engage in an actual physical confrontation when confronted with one.

The normative-appetitive struggle concerns the individual's place in the larger social system. Part of human development involves a process of socialization whereby the system of social norms are learned and internalized. While individuals each have their own specific outlook, a large portion of the individual outlook is shaped by the culture through social norms. Whenever value-orientations, values, attitudes, or opinions originate from societal norms, they are said to be normative in nature. The existence of a normative imperative is no guarantee the imperative will be obeyed. One reason for the discrepancy between normative outlook and behavior concerns the universal tension between societal normative imperatives and the appetites of the individual. Consider the normative-appetitive struggle of a female-to-male transgendered individual: Society has defined this person as female, yet the internal identity is male. Society demands conformity to the binary, yet the appetite yearns for a non-binary existence.

Meddin's work has provided a classification system that brings together the work from a number of different perspectives and allows for a greater understanding of the place of attitude within the human assessment of reality.

Prejudice.

In his classic book, *The Nature of Prejudice*, Allport (1979) defined prejudice as follows:

Ethnic prejudice is an antipathy based upon a faulty and inflexible generalization. It may be felt or expressed. It may be directed

toward a group as a whole, or toward an individual because he is a member of that group (p. 9).

When defined in this manner, the net effect of prejudice places the recipient of the prejudice at a disadvantage not merited by his or her own conduct.

Allport posited that an adequate definition of prejudice required two components: an *attitude* of favor or disfavor, and an over-generalized (and therefore incorrect) *belief*. To Allport, prejudiced statements focus on the attitudinal factor in some instances, and on the belief factor in others. He provided the following (rather dated) examples to illustrate his point:

- 1) I can't abide Negroes.
Negroes are smelly.
- 2) I wouldn't live in an apartment house with Jews.
There are a few exceptions, but in general all Jews are pretty much alike.
- 3) I don't want Japanese-Americans in my town.
Japanese-Americans are sly and tricky. (p. 13)

In these series of examples, the first item illustrates attitude, while the second exemplifies belief. Often, attitude and belief go hand-in-hand, as a generalized belief concerning a particular group as a whole is necessary to sustain a hostile attitude. There appears to be, however, another relationship between the two constructs: Often, a prejudiced person will alter his/her belief so that the negative attitude can endure.

Consider the following conversation:

- Mr. X: The trouble with the Jews is that they only take care of their own group.
- Mr. Y: But the record of the Community Chest campaign shows that they give more generously, in proportion to their numbers, to the general charities of the community, than do non-Jews.
- Mr. X: That shows they are always trying to buy favor and intrude into Christian affairs. They think of nothing but money; that is why there are so many Jewish bankers.

- Mr. Y: But a recent study shows that the percentage of Jews in the banking business is negligible, far smaller than the percentage of non-Jews.
- Mr. X: that's just it; they don't go in for respectable business; they are only in the movie business or run nightclubs (Allport, 1979, pp. 13-14).

This process of rationalization illustrates how beliefs can be accommodated into fitting one's existing attitudes.

Allport (1979) proposed that prejudice was partly an outgrowth of the normal human propensity to categorize:

The human mind must think with the aid of categories... Once formed, categories are the basis for normal prejudgment. We cannot possibly avoid this process. Orderly living depends upon it.
(p. 20)

Categorization allows us both to make sense of new experiences by relating them to past experiences, and to avoid being overwhelmed at the vast number of intricate details found in any situation. The problem comes when these categorical prejudgments evolve into prejudice. Social categories form an indispensable part of human thought and allow us a simple way to organize the social world. Social attributes such as sex and race are mere approximations because in reality they exist along more of a continuum than as discrete categories. Many African Americans have white ancestry, yet they are labeled as *black* (Plous, 2003). Similarly, we have erroneously constrained sex to a dichotomy.

In social psychology terms, an *ingroup* is a group to which someone belongs, while an *outgroup* is a group to which a person does not belong. Generally speaking, people tend to see outgroup members as more alike than ingroup members, which has been termed the *outgroup homogeneity effect* (Plous, 2003). In essence, people tend to see *us* as being more diverse than *them*.

Although prejudice is often thought of as a particular ingroup harboring negative attitudes toward a separate outgroup, Brewer (1999) has argued that this is not always the case; some types of discrimination result not because outgroups are hated, but rather because one's ingroup is highly revered. As a result, positive emotions such as admiration and trust are reserved solely for the ingroup. In her own words, "Discrimination can be motivated solely by ingroup preference, in the absence of any negative affect or hostile intent toward outgroups" (p. 431). This tendency to favor one's own group has been termed *ingroup bias* and has been documented in cultures around the world (Aberson, Healy, & Romero, 2000; Brewer, 1999; Plous, 2003). In this fashion, it appears that the very factors that make ingroup allegiance important to its members can also provide the means for antagonism and distrust of those who compose outgroups. The need to justify ingroup values may manifest as moral superiority of others and lead to conditions of distrust as a result of the social comparisons made. In Western civilizations, the binary notion of sex and gender provides the foundation of our identities. To view oneself as unambiguously male or female is to claim membership in the 'ingroup' of humankind. How much of the negative attitude directed toward the atypically gendered might be attributed to ingroup allegiance?

Research has indicated that prejudice may be connected to self-esteem (Blanz, Mummendey, & Otten, 1995; Brown, Collins, & Schmidt, 1988; J. Crocker & Luhtanen, 1990; Hogg & Abrams, 1990). Fein and Spencer (1997) found that people are more likely to exhibit prejudiced behavior following a drop in self-esteem. In a meta-analysis of ingroup bias and self-esteem, Aberson et al. (2000) found that while both high- and low-self-esteem people exhibit ingroup bias, ingroup bias by those with low self-esteem may

be constrained by situational factors. An implication of this research is that prejudice may well represent a way of maintaining self-esteem (Plous, 2003).

HOMOPHOBIA, HETEROSEXISM, AND SEXUAL PREJUDICE

Bias against those who are not heterosexual has been discussed in terms of *homophobia* (Weinberg, 1972), *heterosexism* (Herek, 1990, 1992b), and *sexual prejudice* (Herek, 2000b). As previously discussed, systematic differences exist between the gay, lesbian, and bisexual (GLB) population and the atypically gendered. However, both populations are seen as challenging the male/female dichotomy: the GLB group by being sexual with persons of the same sex, and the atypically gendered by defying simple categorization into the assumed dichotomy. As a result, a better understanding of the study of attitudes toward gays, lesbians, and bisexuals can provide direction in determining how to assess attitudes toward the atypically gendered.

Psychologist George Weinberg (1972) was the first to use the word *homophobia* to label both heterosexuals' dread of being in close proximity with homosexuals, and homosexuals' self-loathing. The term has also come to mean a general aversion to gayness including both lifestyle and culture. Implied in the term is the existence of an irrational fear of homosexuality (Herek, 2006). Similarly, *heterosexism* has been defined, "...an ideological system that denies, denigrates, and stigmatizes any nonheterosexual form of behavior, identity, relationship, or community" (Herek, 1992b, p. 89). Although the terms are used somewhat interchangeably, generally speaking homophobia has been used to describe individual antigay attitudes and behaviors, while heterosexism has referred to societal-level ideologies and patterns of institutionalized oppression of non-heterosexual persons (Herek, 2000b).

Of the two terms, homophobia is more often used and more widely criticized (Herek, 2000b). It has been argued that homophobia implies that antigay attitudes are inherently the result of irrational fear and, consequently, suggest a form of individual psychopathology as opposed to a socially reinforced prejudice. In recent years, antigay attitudes have become increasingly linked to conservative religious and political ideologies, which have served as a challenge to the view of homophobia as psychopathology.

Given its historical focus on macro-level cultural ideologies, Herek (2000b) has argued that heterosexism is an insufficient replacement for homophobia and offers the term *sexual prejudice* as an alternative:

Broadly conceived, sexual prejudice refers to all negative attitudes based on sexual orientation, whether the target is homosexual, bisexual, or heterosexual. Given the current social organization of sexuality, however, such prejudice is almost always directed at people who engage in homosexual behavior or label themselves gay, lesbian, or bisexual. (p. 19)

Thus defined, sexual prejudice includes heterosexuals' negative attitudes toward homosexual behavior, people with a homosexual or bisexual orientation, and communities of gay, lesbian, and bisexual people. Sexual prejudice, like most prejudices, consists of three principal features: It is an attitude, which includes judgment and evaluation; it is directed at both the individual and group level; and it is negative, often involving hostility or dislike.

Like other types of prejudice, sexual prejudice appears to have multiple underlying motivations (Herek, 2000b). For some, it results from a previous, unpleasant interaction with homosexuals. For others, sexual prejudice may come from deep-seated fears associated with gayness including discomfort with one's own sexuality. In other

instances, sexual prejudice may result from biases held by one's ingroup. Finally, prejudice can result when one believes that homosexuals and the accompanying homosexual community are in direct conflict with one's own value system. Herek posits that these different motivations serve different psychological functions that vary from one individual to the next. For example, one heterosexual's prejudice may serve to ease anxiety associated with fears about sexuality, while another's prejudice might reinforce one's ingroup standing (e.g., "A good Christian").

Assessing Sexual Prejudice

Many instruments have been constructed to assess heterosexuals' attitudes toward homosexuals (for example, Herek, 1984; Horn, 2006; Price, 1982; Ricketts & Hudson, 1990; Van de Ven, Bornholt, & Bailey, 1996; Wagner, 1994). All in all, findings have revealed that higher levels of sexual prejudice are consistently found in older, less-educated people who reside in rural areas of the South or Midwest (Herek, 1994), and that heterosexual men tend to have higher levels of sexual prejudice than heterosexual women (Herek, 2000a; Kite & Whitley, 1998). Religiosity also appears to predict higher levels of sexual prejudice, as those who attend church services regularly and those with fundamentalist Christian ties tend to score higher (Herek & Capitanio, 1996).

Heterosexuals who have had direct experience with homosexual persons systematically show lower levels of sexual prejudice, with the lowest levels held by those who have gay family members or friends (Herek, 2000b; Herek & Capitanio, 1996). In examining racial differences in sexual prejudice, Herek and Capitanio (1995) found that while negative attitudes toward homosexuality were widespread within the African-American community, it did not appear to be more prevalent among Blacks than among Whites.

Typical gender differences were found in that Black men were found to hold more negative attitudes toward gay men than lesbians and Black men held more negative attitudes toward gay men than Black women. The most important predictor of sexual prejudice was the belief that homosexuality is a choice in that the African-American participants who believed that homosexuality is beyond the control of the individual systematically expressed more favorable attitudes than those who saw it as a choice. Consistent with attitudes found in white samples, participants were more likely to hold favorable attitudes if they were highly educated, unmarried, politically liberal, and not religious. The African-Americans surveyed held more favorable attitudes if they had personal experience with a homosexual, although this was not a significant predictor of attitudes when other variables were controlled.

Overall, little research has been done concerning the dynamic cognitive processes associated with antigay attitudes and stereotypes. In other words, little is known about how heterosexuals think about gay men and lesbians (Herek, 2000b).

ATTITUDES TOWARD THE ATYPICALLY GENDERED

Even less is known about attitudes toward the atypically gendered. A search of the keywords *attitudes* and *intersex* yielded zero hits in the PsycINFO database. One hit resulted from a search for *attitudes* and *transgender*, which was a review of a book that provided a history of empirical psychological research conducted on gay, lesbian, and bisexual issues; transgender issues were not even part of the discussion, except in a passage that grouped ‘T’ in with ‘GLB.’ The keyword *attitudes* and the wildcard *transsex** yielded 25 hits. Of those, only three were concerned with a direct measure of the general population’s attitudes toward transsexuals. There were also three that

considered health care professionals attitudes toward transsexual patients. In comparison, a keyword search of *attitude* and *homosexual* yielded 1002 hits.

Extensive searches have revealed no empirical research concerning attitudes toward the intersexed, only a handful of studies attempting to assess attitudes toward transsexuals, and only one that examined attitudes toward transgendered persons who are not transsexual. In total, only four existing measures that address the general population's attitudes toward atypically gendered persons were found. A review of each of them follows:

Attitudes Toward Transsexualism in a Swedish National Survey (Landén & Innala, 2000)

In Sweden, the treatment of choice for transsexuals meeting certain criteria is sex reassignment (Cohen-Kettenis & Gooren, 1999). Not only does this include medical intervention to change the body's physical appearance, but also legal measures to change one's legal sex. In 1972, Swedish law began regulating sex reassignment. Since that time, the public health care system has covered all costs for sex reassignment procedures. Additionally, the rights and duties of the 'new' sex are afforded to all transsexuals, which include the right to marry in the new sex and the right to adopt children. Even so, sex reassignment has remained controversial, as a number of ethical concerns have been raised, including issues of matrimony, child custody, and the public financing of these very costly procedures. To assess the social climate, Landén and Innala (2000) conducted a general inventory of the views on sex reassignment and attitudes toward transsexuals in Sweden. There were three goals of the study: First, to construct a general inventory of the ethical views on sex reassignment and attitudes toward the transsexual population in Sweden; second, to test the hypothesis that views concerning transsexuals might be

predicted by whether the respondents adopted a biological or psychological etiology of transsexualism; and third, to test for differences in attitudes toward transsexuals in men and women, and between younger and older age groups. The study was professed to be the first of its kind.

A total of 922 people aged 19-70 were sampled from the national Swedish registry. Questionnaires were distributed by mail and 688 were returned for a response rate of 67%. The questionnaire consisted of 15 questions (see Appendix D). Results indicate that those who believed that transsexualism results from a somatic etiology held significantly less restrictive views on sex reassignment than those who held a psychiatric/psychological etiology. The somatic group was also more likely to support public financing of sex reassignment procedures, to allow marriage in the new sex, adoption, and working closely with children. Men expressed more restrictive views than women on the right to marry in the new sex and on questions concerning the participants' potential personal relationships with a transsexual.

To assess age difference in responses, the authors divided the sample into two groups based on age. Because the median age of the sample was 44, the younger group was defined as those less than 44 with the older group being defined as those 44 or older. The older group was significantly more restrictive towards sex reassignment in general, although they were more apt to support public funding of the procedures. The two groups did not differ on any of the other items.

Overall, the transsexuals' right to undergo sex reassignment was supported by a majority of respondents. The transsexuals' right to marry in the new sex was supported by 56% of the respondents, but the right to adopt and raise children was only supported

by 43% with 41% opposing. More than 70% of the participants would accept working with a transsexual. Most supported a transsexual's right to work with children. Only 2% reported willingness to have a transsexual as a partner. A total of 8% reported knowing a transsexual.

Although it was never cited, the questions concerning the respondents' potential relationships with a transsexual are reminiscent of the Bogardus Social Distance Scale (Bogardus, 1925). The scale was written to assess people's willingness to participate in various social settings with members of a particular outgroup. Each question on the scale involves varying degrees of personal closeness to members of the group in question. Seven scenarios are given ranging from having a member of the group in question be related to the participant by marriage (a score of 1, or no social distance) to being excluded from the country (a score of 7, or very large social distance). The scale is cumulative in nature in that agreement with any one item implies agreement with all preceding items. (The cumulative scaling of attitude items as an assessment of attitudes was later refined and became known as Guttman scales (Aiken, 2002; Guttman, 1944).) The Swedish participants were asked if it would be possible for them to have an openly transsexual person as a fellow worker, friend, or partner (questions 7, 8, and 9 respectively). A respondent who indicates a willingness to have a transsexual as a partner would have the lowest social distance, a respondent who is unwilling to have a transsexual as a fellow worker would have the highest social distance.

There was no evidence that this scale was developed via psychometric principles. There was no discussion of how the instrument was developed or the rationale behind the questions chosen, nor was there any mention of reliability or validity. This brings into

question the overall quality of the instrument as an assessment tool. Because it was developed in the context of Swedish society, at most the results could only be generalized to Sweden.

Comparison of Attitudes Toward Transsexuality and Homosexuality (Leitenberg & Slavin, 1983)

In this study, the authors compare and contrast attitudes toward homosexuality and transgenderism. Leitenberg and Slavin postulate that at least some transsexuals seek sex reassignment out of a response to their own homosexuality. Consider the introductory sentences:

Homosexual feelings and fear of social censure for homosexuality may play a part in the motivation for transsexual surgery. Just as many transsexual candidates are unable to cope with the social condemnation they experience because of their atypical gender role behaviors, a large number apparently cannot accept in themselves the notion that they have homosexual desires and preferences (pp. 337-338).

To make their case, the authors cite evidence that transsexuals often find the idea of homosexuality repulsive, which leads them to postulate that transgenderism, in at least some cases, might be nothing more than a response to same-sex attraction. This is made evident in the following:

(S)ince they see themselves as members of the other sex, theirs is not the “true” homosexual behavior. The male-to-female transsexual wants to be loved not as a male by another male, but as a female by a male. Similarly the female-to-male transsexual wants to be loved as a male, not as another female. But are these statements anything more than rationalizations, denials of homosexual feelings? ... (O)ne must question why these individuals can accept their transsexual desires but not their homosexual ones? Furthermore, if they could accept their homosexual impulses, would the motivation for transsexual surgery be reduced?” (p. 339)

The authors hypothesize that transsexuality would carry less of a social stigma than homosexuality, not only in the minds of the general public, but to many transgendered people as well. To test this hypothesis, 318 university students were given two scales of five questions each: one set concerning homosexuality, the other set transsexualism. The actual text of the questions was not provided. The authors state that the questions were drawn from "...the most well known surveys of attitudes about homosexuality..." (p. 340) and cite Glenn and Weaver (1979) and Levitt and Klassen (1974). Each scale contained an identical set of five questions, with one set pertaining to homosexuality and the other to transgenderism. The first question specifically addressed general attitudes (e.g., "always wrong"). The next two concerned issues of job discrimination. The fourth questioned beliefs about biological causality, and the fifth asked about adoption. For half of the sample, the homosexuality questionnaire was stapled in front of the transsexual questionnaire; for the other half of the sample the order was reversed.

There was a significant order effect for all questions in that attitudes toward transsexuality were more negative when the transsexual questionnaire was filled out after the homosexual questionnaire. This did not, however, show up in the reverse direction, that is attitudes toward homosexuality were not more negative when the homosexuality questionnaire was filled out after the transsexual questionnaire. As a result, the authors concluded that the clearest picture of the separate attitudes toward both transsexuality and homosexuality would be the one found by examining the responses to the questionnaires that were filled out first.

Significantly more respondents felt that homosexuality was 'always wrong'

compared to transsexuality. Females were significantly more negative toward homosexuality than transsexualism. In terms of adoption, more people felt that transsexuals should be permitted to adopt a child than believed that homosexuals should be permitted to adopt. This difference in favor of transsexuals was again more pronounced in female respondents. Concerning job discrimination, the respondents were asked whether homosexuals or transsexuals should be allowed to work as a judge, a teacher, a minister, a doctor, or as a government official. Female participants were approximately equally supportive of transsexuals and homosexuals in each of the occupations. In regard to transsexuals, the female subjects were much more supportive than the males. More specifically, female respondents were significantly more in favor of transsexuals' employment as judges, teachers, doctors, and government officials than the male respondents. In the case of ministers, an almost equal percentage of female and male students responded positively. Although females tended to respond similarly for both homosexuals and transsexuals, males tended to be more positive toward homosexuals than toward transsexuals being employed in these particular professions. To assess etiological beliefs, the subjects were asked for how many transsexuals/homosexuals did they think the following is true: "Are they born that way?" (p. 342). Less than 10% responded 'all' or 'almost all' for either transsexuals or homosexuals. Approximately 46.8% of the subjects responded 'few or none' for homosexuals, but only 25% chose this response for transsexuals. Twice as many chose 'don't know' for transsexuals (43%) than for homosexuals (21%). This pattern was especially pronounced for females who responded 'don't know' almost 45% of the time for transsexuals, but only 15% of the time for homosexuals. Additionally, 51% of the

females responded ‘few or none’ of homosexuals are born that way, but only 24% responded the same for transsexuals.

The authors concluded from this study that in general, transsexuality provokes less social condemnation than homosexuality and that at least some transsexuals are really just homosexuals claiming to be members of the opposite sex in an effort to escape the accompanying societal stigma attached to homosexuality.

The theoretical perspective undergirding this 24-year-old article is quite problematic, as the authors have confounded homosexuality and transgenderism, and as a result, have severely clouded the issue. They appear to be positing that undergoing medical procedures to physically transition one’s sex is easier than dealing with feelings of same-sex attraction. As a rationale for this position, they quote from interviews with transgendered persons in which the interviewees did not identify as homosexual or, in some instances, displayed disgust at the very notion of homosexuality. It is from this that the authors argue their conclusion. As previously discussed, gender identity and sexual orientation are two completely different constructs. A biological woman, for example, who identifies as male and is attracted to females, might very logically identify as a straight man, albeit one who happens to have the body of a woman. This is a point the authors failed to grasp.

There was nothing to indicate that these questions were developed via psychometric principles. No mention was made of reliability or validity, and no rationale was provided for the questions used. The author’s repeatedly drew conclusions based on one question, which can be problematic in terms of reliability. The question that addressed etiological belief was poorly worded. The subjects were asked for how many

transsexuals/homosexuals did they think the following is true: “Are they born that way?” (p. 342). The available responses were apparently, “all or almost all,” “few or none” and “don’t know.” The responses do not match the question. “Are they born that way,” is a yes/no question.

Theoretical and technical issues notwithstanding, it should be noted that much has changed in the last 25 years concerning society’s attitudes toward homosexuality. In today’s world, allowing legal recognition of same-sex partnerships in the form of marriage is a very real and ongoing political debate, which was most certainly not the case a quarter of a century ago. Homosexuality is much more visible and accepted than it was during the time of this study. As a result, it is highly unlikely that similar results would be replicated in today’s college student.

Homosexuality, heterosexuality, and cross-dressing: Perceptions of gender discordant behavior (Moulton & Adams-Price, 1997).

In an attempt to compare and contrast the attitudes of heterosexual and homosexual males toward heterosexual and homosexual cross-dressers, the authors surveyed 90 male college students (45 heterosexual and 45 homosexual). Five measures were given to each of the participants: a measure of sexual orientation (Kinsey, Pomeroy, & Martin, 1948); a short version of the *Attitudes Toward Women Scale* (Spence, Helmreich, & Stapp, 1974), which assesses the degree to which an individual holds liberal or conservative views toward gender roles; the *Heterosexuals’ Attitudes Toward Homosexuality Scale* (Larsen, Reed, & Hoffman, 1980). Although the scale was designed to measure heterosexuals’ attitudes toward gays, the authors examined the items and decided the scale could be used for homosexual’s attitudes toward homosexuals as well);

the *Self-Concept Inventory* (Robinson & Shaver, 1973; Sherwood, 1965), which provides global measures of self-esteem; and finally, the authors created a composite rating scale they referred to as *Attitudes Toward the Target Character*. Five vignettes were given to each subject and each vignette's character was rated on six items. The scale score was calculated by averaging the participants' ratings of how disturbed, how well adjusted, how successful, how nice, how happy, and how confident the character was, as well as how much the subject would like to have the character as a friend. Additionally, subjects rated the masculinity or femininity of the vignette character on a 1 to 5 scale. Reliability analyses were reported for the Attitudes Toward the Target Character, the Heterosexuals' Attitudes Toward Homosexuality Scale, and the Attitudes Toward Women Scale.

Reliability was not computed for the Self-Concept Inventory because, "...information on the reliability and validity of these measures is widely available, and because these measures are not particularly amenable to alpha reliability, because they have a broad bandwidth" (p. 447).

The participants each read five one-paragraph vignettes. The first four depicted an individual with psychological problems. These vignettes were used to obscure the purpose of the study. The fifth vignette depicted a male who cohabitated with a significant other and was relatively well adjusted except for a tendency to occasionally over-indulge in alcohol. This vignette was varied slightly between one of three conditions. In the first, the male was described as a heterosexual who occasionally enjoyed dressing in women's clothes and going to a local bar. In another, he was described as a homosexual who enjoyed cross-dressing and going to a local bar. In the third condition, he was described as a homosexual and the sentence about dressing in

women's clothing was omitted.

The authors hypothesized a priori that heterosexual males would be equally intolerant of homosexual cross-dressers, heterosexual cross-dressers, and homosexuals who did not cross-dress, and that homosexuals would be more tolerant of non-cross-dressing homosexuals than the other two groups. Additionally, it was hypothesized that homosexual, but not heterosexual, subjects would rate the homosexual non-cross-dressers as more masculine than the cross-dressers.

Heterosexuals were found to be less tolerant of all three conditions of the vignette characters than the homosexuals. Homosexuals rated the non-cross-dressing homosexuals as more masculine than the cross-dressing characters. Homosexual males had significantly more favorable attitudes toward women and more favorable attitudes toward homosexuality than their heterosexual counterparts. When examined independently, the heterosexual males had significantly higher self-concept than the homosexual males. The gay men who held more positive attitudes toward homosexuality also scored higher on the Self-Concept Inventory. Gay males with non-traditional attitudes toward women had higher self-concepts. Heterosexuals who held more positive attitudes toward women also held more positive attitudes toward homosexuality.

In a subtle but very real way, the design of the vignettes situates both homosexuality and cross-dressing in a pathologized context. The first four vignettes, which were used to disguise the purpose of the study, all depicted people with psychological problems. By grouping the homosexual and cross-dressing vignettes within a group of psychologically disturbed descriptions, there is an implicit implication that homosexuality and cross-dressing also result from problems of a psychological nature. It

seems reasonable that by using this system, the authors, either intentionally or not, may well have influenced the subjects' responses. Alternatively, 'hiding' the homosexual and cross-dressing scenarios within depictions of less troubled individuals would have just as easily tapped into the subjects' attitudes without the homosexuality/cross-dressing/psychological disorder implication.

The Development and Validation of the Genderism and Transphobia Scale (Hill & Willoughby, 2005).

The authors conducted a series of three studies in an effort to develop and validate a scale to measure violence, harassment, and discrimination toward cross-dressers, transgenderists, and transsexuals. The authors define each of these terms as follows:

[T]ranssexuals [are] those who use or want to use hormones and/or surgery to change their gender and live full-time in their adopted gender, transgenderists [are] those who change gender often with minimal medical intervention, sometimes moving back and forth between genders, and cross-dressers (who) are those who change gender temporarily using mostly outward symbol of gender like clothing (p. 531).

The studies set out to answer two questions: Can a questionnaire reliably measure anti-trans sentiments? Are negative attitudes toward gender non-conformists related to other constructs like beliefs about gender and heterosexism?

In an earlier work, one of the authors suggested three key constructs that could be used to conceptualize hate against trans people: *Transphobia*, *genderism*, and *gender-bashing* (Hill, 2002). He defined transphobia as an emotional disgust toward individuals who fail to conform to society's gender expectations, which involves feelings of

revulsion to masculine women, feminine men, cross-dressers, transgenderists, and/or transsexuals. Transphobia manifests in the fear that personal acquaintances may be transgender, or in disgust upon encountering a trans person. Genderism is an ideology based in cultural belief that reinforces the negative evaluation of gender non-conformity. Those who are genderist hold that people who fail to conform to societal expectations of gender are pathological. Finally, gender-bashing refers to harassment and/or physical assault of persons who do not conform to established gender norms. In summary, genderism is a broad, negative cultural ideology, transphobia is the emotional disgust and fear, and gender-bashing is fear that manifests in acts of violence.

In the first study, the goal was to develop a questionnaire to assess genderism, transphobia, and gender bashing, which was ultimately named, the Genderism and Transphobia Scale (GTS). The goal was to tap into affective, cognitive, and behavioral expressions of transphobic and genderist attitudes along with tendencies to act violently toward the transgendered. A questionnaire was administered to 227 undergraduates. Potential items for the scale were generated by reviewing the literature on anti-trans sentiments and the difficulties of trans people. A total of 150 statements were written that were believed to have the potential to measure cognitive, behavioral, and affective dimensions of genderism, transphobia, and gender-bashing. Care was taken to include statements that referred to both male-to-female and female-to-male individuals. After balancing negatively and positively worded items and eliminating redundancy, 106 items remained. The items were rated on a 1 to 7 Likert scale (1 = *strongly agree* to 7 = *strongly disagree*).

Weak items were progressively eliminated using the following increasingly

conservative criteria: First, items were eliminated if the range or items scores indicated either a floor or ceiling effect, that is, if the average response on the 7-point scale was either extremely high or extremely low. Second, items that correlated at .5 or lower with any of the genderism, transphobia, and gender-bashing subscale totals were removed. Finally, the best 10 questions for each of the three subscales were chosen based on item-subscale correlations. In two cases, the items were similarly correlated, which resulted in 32 selected items.

Coefficient α was calculated for each subscale. The coefficient $\alpha = .83$ for genderism, .94 for transphobia, and .79 for gender-bashing. The overall coefficient $\alpha = .95$ for all 32, which was probably due to the high correlations among the subscales ($r_{Genderism/Transphobia} = .84$; $r_{Genderism/Gender-Bashing} = .73$; $r_{Transphobia/Genderism} = .83$). All correlations were significant at $p < .0001$). Given the high degree of interrelatedness among the three subscales, they would be better measured as a single dimension.

Validity was assessed by the scale's ability to detect the known gender differences in attitudes toward trans persons. Consistent with expectations, men reported more genderism, more transphobia, and more gender-bashing than women.

The second study sought to further test the validity and reliability of the GTS. Because there were no other known instruments that assessed the constructs of transphobia and genderism, the authors used what they believed were conceptually similar constructs, specifically, attitudes toward homosexuals and belief about gender roles. Additionally, it was theorized that assessing whether the GTS could predict specific attitudes and behaviors that might be related to discriminatory or violent reactions to trans persons would be evidence of predictive validity. Because most referrals for

treatment of gender variance in children and adolescents come from parents (Doering, Zucker, Bradley, & MacIntyre, 1989), parental reactions to a gender variant child were deemed an appropriate criterion variable. There were two research questions driving the second study: Does the GTS measure constructs that theoretically should be related to each other, particularly homophobia/heterosexism and beliefs about gender? Can the GTS predict parents' genderist and transphobic reactions to gender non-conformist children?

Fifty-two parents (18 fathers and 35 mothers) who either had raised or were currently raising a child were given the GTS scale, a *Vignette Assessment Questionnaire*, the *Homophobia Scale* (Wright, Adams, & Bernat, 1999), and the *Gender Role Beliefs Scale* (Kerr & Holden, 1996). The parents were given four vignettes each describing a young child: conformist Timmy, a highly masculine boy; conformist Tammy, a highly feminine girl; non-conformist Tammy, a highly masculine girl, and non-conformist Timmy, a highly feminine boy. The vignettes of the two conformists were nearly identical except for name and gender, as were the two vignettes of non-conformists. The Vignette Assessment Questionnaire assessed parents' attitudes toward the described children in the vignettes. The parents were asked to make six judgments about the mental health of the child on a 7-point Likert scale: the higher the score the more intolerant the parent. The Vignette Assessment Questionnaire had an $\alpha = .88$. The 25-item Homophobia Scale is scored on a 5-point Likert scale (1 = *strongly agree*, 5 = *strongly disagree*) that assesses homophobia. High scorers on the Homophobia Scale may feel nervous around homosexuals, oppose issues of equal rights for gays, and may attack a homosexual for flirtatious behavior aimed toward the respondent. The Gender Role

Beliefs Scale is a 20-item, 7-point Likert scale (1 = *strongly agree*, 7 = *strongly disagree*) that measures gender role ideologies that are defined as prescriptive beliefs about appropriate male and female behavior. The scale measures both traditional and non-traditional attitudes toward the roles of men and women. High scorers believe that men should hold traditionally masculine occupations, be the sole source of financial support for a family, and should take the initiative in courting behaviors, while women should wear dresses or skirts and mothers of children should not work.

Participants were recruited from two community centers. Internal consistency analyses of the GTS yielded an overall α of .88. The subscale α for the genderism scale = .80, .94 for transphobia, and .82 for gender-bashing. A t-test verified that the conformist children were rated as significantly less pathological than the non-conformist children, indicating these parents viewed the non-conformist children more negatively.

The predictive validity of the GTS was examined by means of regression analysis. The GTS scores were used to predict Vignette Assessment Questionnaire ratings for the non-conformist children. It was concluded that the GTS predicted reasonably well.

It was also hypothesized a priori that the GTS would correlate moderately with both the Homophobia Scale and the Gender Role Belief Scale. The correlation between the GTS and the Homophobia scale was $r(52) = .87, p = .0001$ while the correlation between the GTS and the Gender Role Belief Scale was $r(52) = .65, p = .0001$.

The third study tested the GTS scale in a more diverse and larger sample in an effort to establish norms on the scale for a broad university population, retest subscale correlations and coefficient α estimates of internal reliability, and to conduct a confirmatory factor analysis of the subscale structures.

The subscales of the GTS were internally consistent (genderism $\alpha = .79$; transphobia $\alpha = .95$; gender-bashing $\alpha = .87$; total $\alpha = .96$). The genderism and transphobia subscales were highly correlated, $r = .85$, $p = .01$, suggesting they might be tapping highly related dimensions. Because of this high correlation, a two-factor solution was obtained from principal components factor analysis: genderism/transphobia and gender-bashing. All but four items loaded as expected. These items were expected to load on the gender-bashing factor but instead loaded on genderism/transphobia. The authors moved these items to the genderism/transphobia subscale and reported an α coefficient for the revised subscale of .95. Discriminant and convergent validity were assessed by comparing the GTS with seven other scales. It was concluded that the GTS was not simply a measure of self-esteem, gender-role orientation, or positive self-presentation strategies. The completed GTS scale can be found in Appendix E.

The GTS appears to be the only psychometrically designed instrument currently in existence that attempts to measure attitudes toward the atypically gendered. However, there are several issues, both conceptual and technical, with this work that are worthy of consideration.

The authors focus on three key concepts in their conceptualization of anti-trans sentiments and behaviors: transphobia, genderism, and gender-bashing. Because it is based on physically observable behavior, gender-bashing is clearly distinguishable from the other two. However, the difference between transphobia and genderism is not readily obvious. Transphobia is defined as emotional disgust toward the atypically gendered, while genderism is an ideology based on cultural beliefs. Transphobia manifests as fear and disgust, while genderism maintains that the atypically gendered are pathological.

What exactly is the difference between the two constructs? The definitions imply that transphobia occurs on the individual level while genderism at the cultural level, but is it possible to truly disentangle the two? If an individual is disgusted by a man in a dress, is that the result of individual attributes or cultural influence? For that matter, is it not possible that a belief in transsexuality as pathology could be due to individual conviction that is separate from cultural influence? The difference between the two is not clear. Even the empirical evidence suggests as much. The two subscales were highly correlated, so much so that the authors decided on a two-factor solution in the factor analysis. Yet they still chose to name the instrument “The Genderism and Transphobia Scale” implying two different constructs are being captured by the scale. None of the questions appear to specifically address cultural beliefs per se (see Appendix F). Given that these concepts provide the theoretical foundation on which the instrument is developed, a greater clarity was warranted.

There are technical issues with this work as well. The second study reports a sample size of 52 and then gives the degrees of freedom for the correlations among the scales as 52; in correlational analysis, $df = N - 2$. Perhaps most disturbing is the authors claim of utilizing a confirmatory factor analysis when a principal components analysis was used. Principal components analysis is a type of exploratory factor analysis. True, the authors were using PCA as a means of confirming their theoretical factor structure, but this was not a case of confirmatory factor analysis. Such a sizeable misconception brings the authors’ statistical competence into question.

DEFINING ATAG

In order to be clear about what is to be captured in the proposed instrument, a

precise definition of the attitude construct has been constructed. Working from Allport's (1935) classic definition, ATAG has been conceptualized as follows:

Attitude toward the atypically gendered is a state of readiness to respond to those individuals who do not conform, either physically, psychologically, or both, to the socially constructed, mutually exclusive, and collectively exhaustive categories of male and female. ATAG directs an individual's response to all people and things that are seen as challenging to traditional gender boundaries.

CHAPTER THREE

Methods

As has been stated previously, the foundation undergirding this work contends that the discrete categories of male and female fail to adequately describe that part of human experience referred to as sex and gender, evidenced by the existence of two naturally occurring challenges to the binary: the transgendered and the intersexed. Sex and gender focus on two primary considerations: anatomy and presentation. Based solely on the appearance of the genitals, the vast majority of people are judged at birth, if not sometime before, to be either male or female. It is expected that the ensuing identity and the eventual presentation to the world (e.g., mannerisms, appearance, interests) will develop in a way that is congruent with the physical categorization. There are essentially two types of people who do not follow this pattern of development: people who are intersexed and those who are transgendered. Because of their ambiguous anatomies, the intersexed provide a physical challenge to the binary. In contrast, the transgendered come into the world with anatomies that have no discernable ambiguity thereby providing a psychological challenge to the dichotomous notion of sex and gender.

Although these two groups of people combine to form the all-encompassing category of the atypically gendered, they each provide disparate challenges to the dichotomous notion of sex and gender. Consequently, in this work attitude toward the atypically gendered was conceptualized as a two-dimensional construct, consisting of attitudes toward the intersexed and attitudes toward the transgendered, each of which is viewed as being unidimensional. As such, the ATAG-I consists of two unidimensional scales: the Attitude Toward the Intersexed Scale (ATI-S), and the Attitude Toward the

Transgendered Scale (ATT-S).

Construction of the ATAG-I involved five steps: 1) A list of potential items was composed. Item content resulted from the domain-sampling method of instrument development and was based on content analysis of the relevant literature; 2) The prototype instrument was examined by a small group of atypically gendered persons. These individuals were asked to provide feedback on the items, which provided evidence of face validity, and to conduct a retranslation task which served to provide a preliminary estimate of evidence of content validity; 3) A second retranslation task was conducted with a group of naïve adults to determine if the definitions of intersexuality and transgenderism were clear and understandable, and to assess the extent that participants could identify the items that belong to each of the two scales. This helped to identify problems with item clarity and adequacy of the instructions; 4) The prototype instrument was given to a small sample of adults, and then re-administered to the same group after approximately five weeks. A test-retest analysis was then conducted on the data to determine level of temporal stability; 5) Data was collected on a large sample of participants for internal consistency reliability analyses and factor analyses. This was done to assess internal consistency reliability, and content, factorial, and construct validity. Additional information was gathered from this sample that was used to assess evidence of convergent and discriminant construct validity. Steps 4 and 5 were conducted simultaneously. Each of these steps is discussed in further detail below.

ITEM CONTENT VIA DOMAIN-SAMPLING THEORY AND CONTENT ANALYSIS

The Domain-Sampling Model provided the theoretical foundation for the

development of the ATAG-I. This model proposes that any particular measure is in reality a composition of responses to a random sample of items from a hypothetical domain of items that consists of all the items that define the construct of interest (Guttman, 1944; Nunnally & Bernstein, 1994). An item belongs to a domain by virtue of its content. In the domain-sampling model the sampled item subsets reflect the infinite universal item-content domain (Leung & Sachs, 2005). The ultimate objective is to obtain a sample of items that adequately represents the given domain.

One issue with the domain-sampling model is that, due to practical limitations, test items are usually composed rather than sampled from a well-defined domain (Nunnally & Bernstein, 1994). This was especially relevant to the current study because no well-developed knowledge base concerning attitudes toward the atypically gendered currently exists. However, the domain-sampling model typically performs well regardless because the variety of items composed for a test has effects similar to those of actual random sampling. The purpose here was to estimate the measurement that would be obtained if all the items in the domain were measured (Nunnally & Bernstein, 1994).

The domain-sampling model does not require that a particular number of items be sampled in order to accurately define a particular measure (Nunnally & Bernstein, 1994). The items can vary in intensity, severity, or between related components of a domain. As such, content domain sampling requires that all items in a given scale share some common feature or attribute (Pike, 1996).

Content analysis is an all-encompassing term that covers a variety of techniques for making inferences from texts, and has been described as a blend of qualitative, quantitative, and positivistic and interpretive methods (Bernard, 1994). In the

development of the Social Work Values Inventory (SWVI), Pike (1996) utilized content analysis to determine item content. A review of the social work literature was first conducted in order to define the content domain and to select the values that would be included in the SWVI. When a review of conceptual articles on social work values, social work values texts, and general practice texts failed to find a consensus within the profession about which values were considered essential to social work practice, a content analysis was performed to identify the most commonly cited values in the literature. Examining the phraseology used in the literature and counting the number of citations for a given value identified the four values most cited in the literature. In this work, a similar procedure was used for scale item development in that a review of the literature ultimately determined item content. Pike has reported much success in developing instruments using this technique with reported levels of internal consistency reliability estimates of $\alpha > .90$ (C. K. Pike, personal communication, February 6, 2007).

Attitudes toward the intersexed and attitudes toward the transgendered were each viewed as unidimensional constructs, with attitudes ranging from highly negative to highly positive. Accordingly, the goal of the content analysis was not to determine specific attitudes, but rather to identify specific markers of attitude intensity. For example, an account of a cross-dressing man who was beaten by a group of young men who shouted homophobic slurs resulted in the item, "A man who is beaten up for walking down the street while dressed as a woman would have gotten what he deserved" (Number 13 in the ATT-S). The marker of the intensity of the attitude in this item is physical aggression.

In reviewing the literature, both personal accounts of atypically gendered persons

and writings from the general literature in the field were utilized. Of primary interest were the narratives from the atypically gendered. These people have first-hand experience of the effects of societal attitudes toward their conditions, both positive and negative. There were both substantive and theoretical benefits in identifying ATAG items in this manner. From a practical standpoint, this analysis identified information like typical markers of ATAG intensity. Theoretically, identifying markers of attitude intensity via content analysis provided a context that might have otherwise been missed. Knowing the reaction an atypically gendered person had when he/she experienced a particular manifestation of an attitude from another person, and what immediate and long-term effects specific experiences had on him/her provided a real sense of the intensity, or power, of that particular marker. This in turn provided valuable clues as to the type of items that would most likely be the best at capturing a measure of the participants' true attitudes.

Additionally, an analysis of the discourse surrounding the phenomena of transgenderism and intersexuality was conducted. Consider an example from the medical literature concerning the treatment of intersexuality: In a very recent article concerning a consensus statement regarding intersexuality, Lee, Houk, Ahmed, and Hughes (2006) stated that it is generally felt within the medical community that cosmetic surgery performed within the first year of life to make the infant appear more typically male or female will result in improved attachment between children and their parents. This account resulted in the item, "I would have trouble bonding with a son whose genitals did not look like a penis" (Number 4 in the ATI-S).

The response categories for each item ranged from 1 – 5 with Likert anchors

attached to each level of response. Ultimately, higher values were associated with more positive attitudes. The response categories, anchors, and scoring were as follows: 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree nor Disagree, 4 = Disagree, 5 = Strongly Disagree. Due to practical considerations, the majority of the items on each of the two scales were worded negatively. Consider, for example, the first item on the ATI-S: “I could not be a friend to someone whom I knew had ambiguous genitals.” A high score on this item would indicate some level of disagreement, which in turn would indicate a relatively positive attitude. There were also a few items included in both of the scales that were positively worded; for example, number 13 of the ATI-S: “I would have no problem with my brother marrying a woman who had male chromosomes (XY).” Disagreement with this item, evidenced by a high score, would indicate a relatively negative attitude. As such, the positively worded items were reverse coded, which allowed the overall pattern of higher values indicating a more positive attitude to be maintained.

It was initially proposed that a seven-point Likert-type scale would be used with the anchors reading as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neither Agree or Disagree, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree. Negatively worded items (e.g., I could not a friend to someone whom I knew had ambiguous genitalia) were to be recoded to maintain the pattern of higher scores indicating more positive attitudes. The seven-point scale was initially chosen because the additional choices in responses would result in increased variability in the scores. A logistical issue necessitated the change from a seven-point scale that ran from disagreement to agreement to a five-point scale ranging from agreement to disagreement based on the interaction of the following: First, the final survey was composed of 90

items: 25 on the ATT-S, 25 on the ATI-S, 25 on the Index of Attitudes Toward Homosexuals (IAH), and 15 demographic items. Given the proposed sample size, the decision was made to use machine scoring. Two generic answer sheets were available: one with 5 responses and one with 10. The layout of each of these answer sheets is provided in Figure 3.1. Second, the IAH is a copyrighted questionnaire that had to be purchased from Walmyr Publishing. The IAH was scored on a 1 to 5 Likert scale with responses ranging from “Strongly Agree” to “Strongly Disagree.” A blank was provided at the beginning of each item in which subjects were instructed to write their responses. Walmyr Publishing would not give permission to reproduce the scale items within the context of this survey; the IAH original forms had to be used with no changes whatsoever. In fact, Walmyr initially did not want to allow this scale to be used in conjunction with a generic machine-scored answer sheet, but ultimately agreed provided their printed survey was used exactly as is.

Figure 3.1. Layout of the 5- and 10-Response Generic Machine Scored Answer Sheets

Five-Response Answer Sheet:

| | | | | |
|---|---|---|---|---|
| A | B | C | D | E |
| ① | ② | ③ | ④ | ⑤ |

Ten-Response Answer Sheet:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

Given these constraints, it was felt that keeping the initially proposed 1- to 7-point Likert scale that ranged from disagreement to agreement had the potential to confuse the participants in a number of ways. First, preserving the 7-point Likert scale would have required use of the 10-item answer sheet. Giving participants seven choices on the questionnaire and 10 options on the answer sheet would have been confusing and could have led to erroneously scored items. Second, moving from a 7-point scale in the ATAG to a 5-point scale on the IAH would have no doubt introduced additional confusion. Finally, even more confusion would have resulted from requiring participants to think in terms of 1 = Strongly Disagree on the ATAG and then switching to 1 = Strongly Agree on the IAH. The complexity of these logistical issues would have no doubt added a considerable amount of measurement error to the survey scores. As such, it was decided to adopt the 1- to 5-point, ‘Strongly Agree’ to ‘Strongly Disagree’ scale of the IAH for both scales of the ATAG-I.

SMALL GROUP FEEDBACK TO ASSESS EVIDENCE OF FACE VALIDITY AND CONTENT VALIDITY

A set of 50 potential items, 25 transgendered and 25 intersexed, plus descriptions and instructions were generated to form the first draft of the ATAG-I (see Appendix F). The prototype instrument was subsequently examined by a group of three atypically gendered persons, which included one post-operative female-to-male transsexual, one male-to-female transsexual who lived part-time in the female role and who was undecided on whether or not to undergo sex-reassignment procedures, and one non-operative, non-transitioning, female-to-male transgendered person. Each person was asked to provide feedback on the items in an effort to gather evidence of face validity and

to conduct a retranslation task to provide a preliminary estimate of evidence of content validity. Essentially, these atypically gendered persons served as ‘experts’ on ATAG. Due to their firsthand experience of society’s attitudes toward them, it was felt they would be uniquely qualified to offer valuable feedback on potential items. The purpose of this analysis was not to gauge the attitudes held by these individuals, but rather to gather their expert opinions and reactions to the item content.

It was initially proposed that 5 – 20 atypically gendered people would participate in the retranslation task. The three aforementioned transgendered individuals plus two intersexed individuals originally agreed to participate. The two intersexed individuals, however, failed to respond to follow-up communiqués. After meeting with the three transgendered persons and receiving their input and responses, it was felt that an adequate amount of feedback on the items had been obtained and those three individuals served as the final sample for this part of the study.

The Retranslation Task

Each individual in this group was asked to perform a retranslation task of the items. The conceptual logic behind the retranslation procedure parallels a process used to translate text from one language to another. A successful language translation requires not just a literal word-to-word translation, but also adherence to the connotations of the original text so that the intention of the original meaning is preserved. Typically, material is translated into the foreign language by one translator, and then retranslated by another back into the original language by a second translator. When inconsistencies arise, the translations are corrected (P. C. Smith & Kendall, 1963).

In the current study, the retranslation task was used in an effort to examine item

ambiguity and to provide a quantitative estimate of the extent that the two scales were conceptually distinct (Pike, 1996). Subjects were met with individually and each took less than 30 minutes to complete the retranslation task. Each item was printed on a slip of paper that measured approximately 3" X 8.5. Subjects were given a stack of these slips that contained the total number of 50 items from the ATAG-I in random order.

Additionally, each subject was provided with two envelopes: one labeled "intersex" and one labeled "transgender" with the appropriate description attached. The respondents were instructed to place each item into the envelope they believed corresponded to the type of scenario (intersex or transgender) represented by the item. In this manner, the subjects were retranslating the group of randomly arranged items back into the original two scales. The extent to which the participants agreed that the item represented the scale for which it was constructed provided a quantitative estimate of the conceptual distinctness of the two scales (Pike, 1996). Smith and Kendall (1963) set the criterion level for acceptable agreement of retranslation tasks at 50%; in the development of the Social Work Values Inventory, Pike set the criterion at 70%. In the current study, any item that was identified as problematic by at least one atypically gendered participant was examined and reworded as necessary.

Feedback on Item Content to Assess Face Validity

After the retranslation task was completed, the atypically gendered respondents examined the entire prototype instrument, complete with instructions, in order to provide feedback on item content and quality of the instructions. Concerns raised by any of the atypically gendered participants were discussed and noted. This was done to gather evidence of face validity.

Face validity has been described as reflecting the extent to which the respondents feel the instrument measures what it is intended to measure, with the question at hand being: Does the item *look* like it measures what it is claiming to measure? Face validity differs from content validity in that face validity concerns judgments about items after an instrument is constructed, while content validity concerns the plan of content and item construction before it is constructed. However, face validity has also been considered to be a limited aspect of content validity (Nunnally & Bernstein, 1994).

RETRANSLATION TASK AND FEEDBACK FROM A NAÏVE SAMPLE TO ENSURE ITEM CLARITY AND ADEQUACY OF THE INSTRUCTIONS

There is a widespread dearth of information concerning the phenomena of transgenderism and intersexuality within the general population. As a result, it was assumed that many if not the majority of people taking the ATAG-I would be completely unfamiliar with these two groups of people. To compound matters, what little is known is in many instances erroneous. Consequently, great care was taken to provide enough information in the directions of the scales to ensure the subjects would have enough understanding to provide responses that were valid indications of the intensity of their attitudes (see Appendix G).

A retranslation task, similar to the one used with the sample of atypically gendered participants with a few modifications, was conducted with a group of 22 naïve adults, all students in a graduate-level social work class. First, each participant was provided with all of the non-item text from the ATAG-I, including both instructions and descriptions of the phenomena of intersexuality and transgenderism. As before, subjects were provided with a stack of slips of paper that represented each item from the ATAG-I,

and two envelopes that represented the two scales. Before placing an item in its respective envelope, however, these participants were asked to comment on any item they found confusing by simply circling an unfamiliar word or writing a short note on the slip of paper briefly detailing the nature of their confusion.

This retranslation task aided in determining if the definitions of the two constructs were understandable, if the items had been written with sufficient clarity, and the extent that participants were able to identify the items that belonged to each of the two scales. As before, items, as well as definitions, descriptions, and instructions found to be problematic by at least one participant were re-worked as needed.

TEST-RETEST ANALYSIS ON A SMALL SAMPLE TO GATHER EVIDENCE OF TEMPORAL STABILITY

A measure is reliable to the extent that a subject's responses remain consistent on repeated measurements (Thorndike, 1997). It is reasonable to assume an individual's ATAG will remain relatively stable over time, barring an event that might cause a shift in attitude. Consequently, it was expected that a reliable measure of ATAG would result in similar scores when given repeatedly to the same group of people over time. This evidence of temporal stability is known as test-retest reliability. Generally speaking, the more similar the results of the two testings, the greater the test-retest reliability of the instrument.

The test-retest method has an inherent problem in that subjects' memory from the first test can most certainly influence the retest. Particularly, subjects tend to repeat their responses to the extent that they remember them, and to utilize similar work habits and similar modes of guessing (Nunnally & Bernstein, 1994). Both have the potential to

artificially inflate this estimate of reliability. The ATAG-I prototype was given twice to the same small sample of people approximately five weeks apart.

In order to allow the two sets of responses to be matched, the respondents were asked to provide a six-digit number that was composed of the last four digits of their Social Security number plus the last two digits of their birth year. For example, someone with the fictitious Social Security number 423-89-1933 who was born in 1972 provided the number 193372. This allowed the two sets of responses to be matched while participant anonymity was maintained.

LARGE SAMPLE SURVEY OF THE INSTRUMENT PROTOTYPE

A large sample of 271 participants was recruited from a major Midwestern university. Data was collected during regularly scheduled class time and was subsequently assessed for internal consistency reliability, and content, factorial, and construct validity.

Internal Consistency

Internal consistency is an estimate of reliability that refers to the degree to which all of the items in a scale measure a common characteristic of the respondent. The procedure for estimating internal consistency is based on the idea that each item in a scale is in essence a one-item scale. Hence, the total scale of n items is viewed as a set of n parallel, albeit very short, scales. An estimate of the reliability of the total scale is then developed via analysis of the statistics of the individual items of the scale. This estimate of reliability is contingent on the consistency of the subject's responses from item to item and is based on both the standard deviation of the test and the standard deviation of each item (Thorndike, 1997). Although there are several procedures for obtaining such

estimates of reliability, in its most general form, this procedure is called *coefficient alpha* (Cronbach, 1951). It has been suggested that a coefficient alpha estimate of reliability should be applied to all new measurement models. (Nunnally & Bernstein, 1994).

Generally speaking, if α is extremely low, the test is either too short or the items have very little in common. To assume adequate reliability, α levels should be at least .80 (L. A. Clark & Watson, 1995).

Factorial Analysis

It was hypothesized a priori that ATAG is a two-dimensional construct consisting of attitudes toward the intersexed and attitudes toward the transgendered. As such, two separate scales were constructed to assess each dimension. If ATAG has been correctly conceptualized, then a factorial analysis of the entire instrument should support the notion of a two-dimensional construct. If the items behave as expected in the analysis, evidence of construct validity can be argued.

A factorial analysis using a principal components method of extraction was conducted on the entire ATAG-I. Factorial procedures are used to reduce a large number of observed variables to a smaller number of factors in an effort to identify underlying dimensions within the original variables (Tabachnick & Fidel, 2007). Principal components analysis analyzes all of the variance in the observed variables, while factor analysis procedures analyze only the variance that each observed variable shares with other observed variables. In other words, principal components analysis analyzes variance, while factor analysis analyzes covariance. Nunnally and Bernstein (1994) contended principal components analysis was the best choice for factor extraction when the goal is optimization of a particular property of the sample data. PCA maximizes the

amount of variance that can possibly be explained through a straightforward approach that is guaranteed to provide a solution. It was expected the principal components analysis would result in a two-component solution with the items from the Attitudes Toward the Intersex Scale loading on one component and the items from the Attitude Toward the Transgendered Scale loading on the other component.

After extraction, an oblique rotation of the component solution was performed to aid in interpretation. It has been argued that oblique rotation is preferred over orthogonal rotation procedures, particularly in the social sciences (e.g., Conway, 2003; Fabrigar, Wegener, MacCallum, & Strahan, 1999; Preacher & MacCallum, 2003). In contrast to orthogonal rotations, oblique rotation allows the extracted factors or components to correlate with one another. In most cases of social science research, it is likely that underlying dimensions will be related making the logical choice in most instances oblique rotation. Even in a case where the best simple structure results in two factors that are uncorrelated, an oblique rotation will yield estimates of the correlations among the factors that are close to zero and will produce a solution very similar to an orthogonal rotation (Fabrigar et al., 1999). Given that attitude toward the intersex and attitude toward the transgendered are believed to be two parts of the overall construct of ATAG, it is quite likely the two resulting components will indeed be related making an oblique rotation the most logical choice.

Construct Validity

Even though sexual orientation is a separate issue from both gender identity and sexual ambiguity, being sexual with a person of the same sex is seen as breaking traditional sex and gender boundaries, which raises an interesting research question: Will

people's attitudes toward homosexuals predict their attitudes toward the atypically gendered?

A number of stable patterns of responses to measures of attitudes toward homosexuals has been identified. Generally, heterosexual men display more negative attitudes toward gays than do heterosexual women. Heterosexuals who identify with a fundamentalist religion and frequently attend religious services report more negative attitudes toward gays than do members of liberal denominations or the non-religious (Herek & Capitanio, 1996). Political party affiliation and political ideology has been shown to predict attitudes toward homosexuality, with conservatives and Republicans reporting more negative attitudes (Yang, 1998). Additionally, more positive attitudes toward gays are associated with whether or not a heterosexual personally knows a gay person. The most positive attitudes are found in those who have gay friends or family members, who describe those relationships as being close, and who report having discussed the homosexual's sexual orientation with him or her (Herek, 2000b; Herek & Capitanio, 1996). Generally speaking, it is expected that more negative attitudes toward homosexuals will be held by men, by those who adhere to a fundamentalist religion, by political conservatives, and by those who do not personally know a gay person. An additional predictor of attitudes toward homosexuals is etiological beliefs, with those believing that homosexuality is beyond an individual's control holding significantly more favorable attitudes toward gay men and lesbians (Herek & Capitanio, 1995).

These known patterns of attitudes toward homosexuals raise a number of pertinent research questions: Are there systematic differences in ATAG of self-identified men and women? Do those who follow a fundamentalist religion and attend frequent

religious services hold systematically more negative attitudes toward the atypically gendered? Does knowing an atypically gendered person or having a transgendered or intersexed family member result in more positive attitudes?

Because so little is currently known about the nature of attitudes toward the atypically gendered and those who hold these attitudes, it was simply not practical to formally hypothesize expected general levels of relationships between these individual characteristics and ATAG. However, a similarity among attitudes was expected and such a finding would yield evidence of construct validity. The proposed two-dimensional nature of ATAG invites a final research question: Are there systematic differences in levels of attitudes toward the intersexed and attitudes toward the transgendered? Consider the issue of etiological beliefs. Given that the belief that homosexuality is a choice predicts more negative attitudes toward gays, it is reasonable to expect that those who view transgenderism as a choice will hold systematically more negative attitudes toward the transgendered. However, given the difficulty in arguing that intersexuality is a choice, will etiological beliefs concerning homosexuality and transgenderism result in a more negative attitude toward the intersexed?

To address these research questions, the Index of Attitudes Toward Homosexuals (IAH) (Hudson & Ricketts, 1980) was also given to this sample of participants and the relationship between the IAH and ATAG-I was examined. A list of demographic items was also given (see Appendix G), which aided in the exploration of each of the aforementioned research questions. Again, given the dearth of current information, it was not possible to provide reasonable a priori hypotheses concerning the nature, direction, and magnitude of these relationships.

Distribution of the Materials to the Large Sample

In total, the large sample group was given the Attitude Toward the Transgendered Scale, The Attitude Toward the Intersex Scale, the Index of Attitudes Toward Homosexuals, and the demographic questionnaire. Participants were instructed to record their responses on a generic answer sheet that allowed machine scoring. To simplify the measure for the participants as much as possible, the IAH was placed at the beginning of the stack for all participants. The demographic items were placed at the end with the two scales of the ATAG-I in the middle. The order of the Attitudes Toward the Transgendered Scale (ATT-S) and the Attitudes toward the Intersexed Scale (ATT-I) was systematically varied. Specifically, approximately half of the sample received a packet that contained the IAH, the ATT-S, the ATI-S, and the demographic questionnaire in that order, while the packet for the other half was arranged in the following order: the IAH, the ATI-S, the ATT-S, and the demographic questionnaire. Systematically varying the order of the ATAG scales in this way allowed for a test of order effects to be conducted.

Potential Lack of Variability on the Scale Items

Because so little is currently known about attitudes toward the atypically gendered, it was not possible to formally hypothesize a priori the extent that responses would indicate highly negative or highly positive attitudes. However, given society's current commitment to the two-and-only-two sex/two gender paradigm, a trend toward more negative attitudes was expected. There was concern that a preponderance of negative attitudes might result in a lack of variability in item responses, which would ultimately attenuate the inter-item correlations and considerably deflate the reliability analysis. As such, it was initially proposed that the survey be given to a number of

atypically gendered persons in an effort to ensure adequate variability. A group of atypically gendered persons were recruited with the help of the Indiana University Gay, Lesbian, Bisexual, and Transgender Student Support Services (GLBTSSS) who initiated contact with individuals from three transgendered groups: A student-led support group at Purdue University; IndyBoyz, an Indianapolis support group for female-to-male transgendered individuals; and the Indianapolis based Indiana Transgender Rights Advocacy Alliance (INTRAA). The contact person estimated he could distribute the surveys to approximately 40 persons. Although he recruited from all three groups, only six transgendered individuals from those organizations chose to participate; of those, only two self-identified as transgendered. However, early estimates of internal reliability from the early respondents suggested the presence of adequate variability in the data. Since no formal hypotheses were being tested concerning the population of atypically gendered people, the decision was made to forego further recruitment of atypically gendered participants.

The findings associated with each of these steps are detailed in the following chapter.

CHAPTER FOUR

Results

This section details the results of the analyses. All statistical analyses were performed using SPSS version 15.0 for Windows with a listwise deletion of missing data.

THE RETRANSLATION TASK ITEM SUMMARY

The atypically gendered participants erroneously classified three items and identified two others as being either, “not clear,” or “unable to tell.” In contrast, the naïve participants incorrectly classified 19 items. Details of each of these items, including number of classification errors, comments, and any change made to each item is provided below. Original items are italicized and listed in the order of most errors in classification to fewest. The revised items are presented in bold face type.

Attitudes Toward the Transgendered Items Erroneously Classified as Intersexed.

Several items from the Attitudes Toward the Transgendered Scale (ATT-S) were flagged as potentially problematic by the retranslation tasks and detailed below.

- Eleven naïve subjects and one atypically gendered subject (ATG) erroneously classified the following as intersexed, indicating a serious issue with the item:

21) It would upset me to share a public restroom with someone whose sex was not readily apparent.

The following change made the item more clearly descriptive of a transgendered condition:

21) It would upset me to share a public restroom with a person who claimed to feel like the other sex.

- Several naïve participants misclassified Items 23, 20, and 2:

23) I think women who look masculine and make no attempt to look feminine are strange (5 naïve errors).

20) When I cannot tell if a person is a man or a woman, I usually assume that person is weird (4 naïve errors)

2) I do not like to be around masculine women (4 naïve errors).

Misclassification of these items illuminated an apparent misunderstanding of intersexuality. It appears these subjects did not understand that an intersexed condition is in all likelihood not readily apparent. In an effort to remedy this confusion the following sentence was added to the description of intersexuality: *It is usually not possible to identify people who have intersexed conditions unless you can see their genitals or know something about their gonads or chromosomes.* (See Appendix H to view the entire revised intersexed description.)

Although Item 2 is clearly an item about transgendered people, it was revised in an effort to increase clarity as follows:

2) I do not like to be around masculine-looking women.

- Two naïve respondents misclassified the following item:

18) Some people experience gender as fluid: some days they like a man and some days they feel like a woman. I think these people are most likely mentally disturbed.

The source of the confusion on this item is not readily apparent unless the respondents were thinking the gender identity of an intersexed person might fluctuate. At any rate, the question is clearly one of identity and not physical ambiguity, making it unquestionably an issue of transgenderism. There was, however, a typographical error that was identified by one of the naïve respondents: the word “feel” was inadvertently left out (“...some days they feel like a man and...”). While considering the typo, it was decided to reword the item as follows:

18) Some people experience gender as fluid, some days feeling like a man and

some days feeling like a woman. I think these people are most likely mentally disturbed.

- Either one or two naïve participants misclassified the following items.:

17) A man should feel like a man and a woman should feel like a woman. Anything else is unnatural (2 Naïve errors).

3) Anyone who wants to get a sex change operation is mentally disturbed (1 Naïve error).

8) I would not want my young son to be alone with a woman who used to be a man (1 Naïve error).

11) I would be profoundly disturbed if I found out my best male friend told me that he really felt like a woman (1 Naïve error).

24) I believe sex change operations are morally wrong (1 Naïve error).

On examination, it was felt the items were clearly transgender in nature and that no revisions were necessary.

- The following item was misclassified by one naïve participant:

15) I would not want my daughter to be left alone with a woman who had undergone a sex change operation and was currently living as a man.

This item is clearly an issue of identity not physical ambiguity. However, in examining this item, a different issue emerged: It is a distinct possibility that respondents who visualize an adult daughter might answer systematically different than those who consider a young girl. As a result, it was decided to insert the word “young” as follows:

15) I would not want my *young* daughter to be left alone with a woman who had undergone a sex change operation and was currently living as a man.

Typographical Errors.

The following items contained typographical errors that were identified by the retranslation tasks and were revised as follows:

16) I could be friends with a person who performed in drag show.

16) I could be friends with a person who performed in a drag show.

10) Watching a drag show would make feel me uncomfortable.

10) Watching a drag show would make *me feel* uncomfortable.

Attitudes Toward the Intersexed Item Erroneously Classified as Transgendered

The following ATI-S items were identified as potentially problematic by the retranslation tasks:

- Eight naïve participants and two ATGs identified the following item as problematic:

24) If I found out my best male friend did not have a penis and spent the first 10 years of his life living as a girl, I would not be friends with him.

On examination, it can be seen that this item could be conceived as a biological female who transitioned to male around age 10, although transitions rarely, if ever, happen that young in this country. Regardless, it was decided to reword the item as follows:

24. If I found out my best male friend was born with ambiguous genitals and spent the first 10 years of his life living as a girl, I would not be friends with him.

By using the descriptive phrase, ‘...with ambiguous genitals’ the item becomes clearly an issue of intersexuality.

- Four naïve participants incorrectly classified the following item as transgendered:

16) It would not bother me if I found out that a male friend was born without a penis.

The source of confusion here is readily apparent as this item could easily apply to a female-to-male transsexual. As a result, it was reworded as follows:

16) It would not bother me if I found out that a male friend was born with

ambiguous genitals and did not currently have a penis.

- Two naïve participants misclassified the following:

23) A girl who does not have a vagina would ultimately have trouble identifying as a female.

Conceivably, this could describe a post-operative male-to-female, but it is a bit of a stretch. If a young biological male transitioned to female without a vaginoplasty she would indeed be a "...girl who does not have a vagina..." But how could such a person have trouble identifying as a female when that was a defining characteristic in the first place? That being said, the following change makes the scenario clearly about a congenital issue apparent at birth, ruling out a transgendered condition:

23) A girl born without a vagina would ultimately have trouble identifying as a female.

- The following item was erroneously classified by one naïve participant and flagged as being unclear by one ATG:

13) I would have no problem with my brother marrying a woman who had male chromosomes (XY).

Although this item was intended to describe an intersexed condition, closer inspection revealed it could apply to a transgendered scenario: If a post-surgical male-to-female transsexual was allowed to marry a man, this person could be seen as "...a woman who had male chromosomes..." Therefore, the following change was made:

13) I would have no problem with my brother marrying a person who was identified as female at birth, and who had male chromosomes (XY).

- Two naïve participants classified the following intersexed item as transgendered:

7) A newborn boy with a penis so small he would never be able to urinate standing should undergo a sex change operation and be raised as a girl.

It is quite likely that the participants were not seeing a small penis as a case of

ambiguity, which contributed to the confusion. Additionally, the term “sex-change” may have triggered a knee-jerk reaction to transgenderism. This scenario actually describes the medical condition *micropenis*, which applies to situations where an unambiguous male is born with an extremely small penis (often defined as two standard deviations below the mean penis size) and is considered a condition of intersexuality. Historically, medical protocol for this condition was to amputate the penis, castrate the infant, perform multiple medical procedures to make the child appear female, and raise the child as a girl. Although this protocol is currently being questioned by the American Medical Association, it is still carried out in some cases. Consequently this is an extremely important item. Therefore, the following change was made in an effort to make the item less wordy and attenuate existing confusion:

7) A newborn boy with a penis so small he would never be able to urinate standing should undergo a sex change operation.

- The following item was erroneously classified by one naïve participant and one ATG felt the item was unclear, arguing the scenario was not a matter of anatomical ambiguity:

3) *A young boy who is not able to urinate from a standing position should have surgery on his penis to allow him to stand, even if it means he will have little sexual feeling as an adult.*

This item was written to capture the medical condition *hypospadias*. In these cases the urinary meatus, which is the opening in the penis that allows both urine and semen to exit the body, is not located at the center of the tip of the penis. In mild cases, the opening may simply be ‘off-center,’ but in severe cases the opening is found at the base of the penis. Even though individuals born with hypospadias are unambiguously male, the condition is considered to be an instance of intersexuality

because it is not the *standard male anatomy*. In severe cases, the male will be unable to urinate standing. This is an important item. The medical field holds that surgical procedures should be done to correct the condition so the male will be able to stand while urinating at all costs. In severe cases the surgical corrections typically do not hold and repeated operations are necessary. Adult men who have been through these medical interventions often report chronic urinary tract infections and little to no sexual sensitivity. Ironically, many of these adults still have to sit to urinate (for a personal account, see Devore, 1998). As a result, it was felt the item needed to be included regardless of the issues raised by the atypically gendered respondent. In an effort to improve clarity, the item was reworded as follows:

3) A infant male who is born with a penis that will not allow him to urinate standing should have surgery on his penis to allow him to stand even though he may have little sexual feeling as an adult.

- The following item was erroneously classified by one naïve participant:

8) I would feel uncomfortable around a man who I knew had been born with ambiguous genitals, was raised as a girl until puberty, and then switched to living as a boy.

The following slight change was made to the item in an effort to improve clarity:

8) I would feel uncomfortable around a man who I knew had been born with ambiguous genitals and was raised as a girl until puberty, and then switched to living as a boy.

- One naïve participant misclassified the following question as transgendered:

9) I would be uncomfortable around a man who had an extra female chromosome (XXY) and protruding breasts.

This is clearly an issue of physical ambiguity and not identity. No revisions were made.

Reverse Coding

In examining the feedback raised from the retranslation tasks, an issue with the

scoring came to light. In the original list of items, only four items of the Attitudes Toward the Intersexed Scale (items 13, 15, 16, and 17; e.g., *I would be comfortable working closely with someone who had both an ovary and a testicle*, ATI-S item 17), and two items (14 and 16) of the Attitudes Toward the Transgendered Scale were worded positively. As a result, it was decided to revise items 17, 23, and 24 of the ATI-S and items 4, 7, and 21 of the ATT-S so they would be worded positively. Additionally, some of the items were reordered so that the positively worded items appeared more randomly within the entire list. The final version of these items can be found in Appendix H.

Summary

The retranslation tasks identified several issues of item clarity and the problematic items were revised and improved. A shortcoming of the description of intersexuality was identified and remedied. Several items were reworded so that more items were worded in a positive light.

With the exceptions of items 2, 20, 21, and 23 of the Attitudes Toward the Transgendered Scale and items 16 and 24 of the Attitudes Toward the Intersexed Scale, all items were either classified correctly or were misclassified by only one or two respondents. The revised and final version of the ATAG-I is listed in its entirety in Appendix H.

SMALL SAMPLE TEST-RETEST ANALYSIS

The completed ATAG-I was given to a total of 45 participants to gather evidence of temporal stability. The participants were recruited from an undergraduate social work class and a graduate education class. Approximately five weeks later, these participants again completed the ATAG-I. Several did not complete all items and were dropped from

the analysis. Additionally, several failed to provide adequate identification numbers, which made it impossible to match their scores from time one to their scores from time two. In total, 41 participants were included in the final analysis for the ATT-S and 40 for the ATI-S.

Item scores were reversed coded as necessary and summed which yielded a total score for each scale. A Pearson's Product Moment Correlation was then performed to compare the scores for each scale from the two time periods. The resulting test-retest reliability coefficients were as follows: ATT-S, $r(39) = .895$, $p < .001$; ATI-S, $r(38) = .850$, $p < .001$. Both tests were two-tailed. The magnitude, direction, and statistical significance of these coefficients indicate that participants' attitudes remained relatively stable over time.

LARGE SAMPLE SURVEY OF THE INSTRUMENT PROTOTYPE

A total of 271 participants were recruited from the aforementioned transgendered groups, plus undergraduate and graduate classes in social work, sociology, and education from a Midwestern university. Of those, 16 did not respond to the item that indicated which form of the survey was being answered (i.e., ATT-S first or ATI-S first), while an additional two respondents provided nonsense answers to that item. Consequently, it was not possible to know which responses corresponded to which items for those people and they were dropped from the analysis bringing the total useable sample size to 253.

Self-identified females outnumbered self-identified males by more than three-to-one (Males: $n = 53$ or 20.9%; Females: $n = 196$ or 77.5%). Three people identified as transgendered, while no one identified as intersexed. One person did not respond to the gender item. The vast majority (81.4%) of the participants fell in the age range of 18-25

(n = 206), while 20 fell in the range of 26-30 (7.9%), 10 between 31-35 (4.0%), 3 between 36-40 (1.2%) and 11 over 40 (4.3%). Three participants did not indicate their ages. A total of 200 were undergraduates, 46 were graduate students, 5 were not currently attending school, and 2 people failed to provide information. In terms of sexual orientation, almost 90% identified as exclusively/primarily heterosexual (n = 226). Of the remaining, three identified as exclusively/primarily homosexual, seven as bisexual, eight as asexual, and four as 'other.' Five people did not respond to the item. Approximately 67% had never married (n = 170), 16% were currently married (n = 40), 11% were cohabitating (n = 27), 7 were divorced or currently separated, 2 were widowed, and 7 provided no relationship information.

Reliability of the Scale Scores

Distributions of the scale scores and estimates of internal consistency were used to evaluate the reliability of the instrument scores. Cronbach's (1951) alpha was used to evaluate internal consistency.

T-tests for skewness and kurtosis were conducted for both scales of the ATAG-I. Results and descriptives for each scale can be found in Table 4.1. Working from an alpha of .01, neither scale exceeded the critical value of t (two-tailed) indicating the scores fell along a relatively normal distribution.

Estimates of Internal Consistency for the Attitude Toward the Intersexed Scale.

To assume adequate reliability, α levels should be at least .80 (Nunnally & Bernstein, 1994); for the ATI-S, $\alpha = .933$. Descriptives for each item can be found in Table 4.2.

An item analysis was conducted to assess how the individual items related to the

overall scale score. Results are listed in Table 4.3. The column labeled *Scale Mean if Item Deleted* illustrates what the average score for the scale would be if that particular item was excluded from the scale (Norusis, 2004). For example, it can be seen from Table 4.1 that the mean for the total ATI-S scores = 91.16. If item 1 were eliminated from the scale, the overall average score would be equal to 87.22. The consistencies of these values indicate that all items were contributing more or less equally to the overall mean.

Table 4.1. Descriptives and t-Tests for the Assumption of Normal Distribution for the Attitudes Toward the Intersexed Scale, and the Attitude Toward the Transgender Scale

| | N | Min. | Max. | Mean (SD) | Skew (SE) | t ⁺ | Kurtosis (SE) | t ⁺⁺ |
|-------|-----|------|------|--------------|-------------|----------------|---------------|-----------------|
| ATI-S | 236 | 37 | 125 | 91.16(15.88) | -.345(.158) | -2.18 | .488(.316) | 1.54 |
| ATT-S | 241 | 25 | 125 | 83.27(23.02) | -.350(.157) | -2.23 | -.492(.312) | -1.58 |

Note: ATI-S = Attitude Toward the Intersexed Scale; ATT-S = Attitude Toward the Transgendered Scale; SD = Standard Deviation; SE = Standard Error. ⁺t = Skew/Standard Error of Skew; ⁺⁺t = Kurtosis/Standard Error of Kurtosis; $\alpha = .01$, two-tailed.

The column labeled *Corrected Item-Total Correlation* provides the Pearson Product Moment correlation between the score on the individual item and the sum of the scores on the remaining items (Norusis, 2004). For example, the correlation between the item 2 score and the sum of the scores on all items but item 2 is .592. The goal is to have each of the individual items correlate with the complete test. The lowest correlation concerns Item 7: *A newborn boy with a penis so small he would never be able to urinate standing should undergo a sex change operation*, $r(234) = .154$. Often, the prudent course of action is to delete items with low correlations. The distribution of this item was significantly skewed (skew = $-.520$, SE = $.154$, $p < .01$) with only 7 people indicating some level of agreement, 63 neither agreeing nor disagreeing, and 179 responding with some level of disagreement. It is possible the restriction of range resulting from the absence of agreement scores served to attenuate the correlation of the scale with the item.

The *Cronbach's Alpha if Item Deleted* value for this item is .935, illustrating the item is not hindering the internal reliability of the scale. Given the overall high magnitude of Cronbach's alpha and the conceptual importance of this item previously discussed, the item was retained.

Table 4.2 Item Descriptives for the Attitudes Toward the Intersexed Scale

| Item Number | Mean | Standard Deviation |
|-------------|------|--------------------|
| 1 | 3.93 | 1.06 |
| 2 | 3.72 | 1.20 |
| 3 | 3.79 | .97 |
| 4* | 3.42 | 1.04 |
| 5 | 4.03 | .91 |
| 6* | 3.42 | 1.18 |
| 7 | 4.34 | .75 |
| 8 | 3.62 | 1.06 |
| 9 | 4.08 | .88 |
| 10 | 3.94 | 1.05 |
| 11 | 3.47 | 1.12 |
| 12 | 3.33 | 1.10 |
| 13 | 3.83 | .98 |
| 14 | 4.01 | .94 |
| 15 | 3.77 | 1.04 |
| 16* | 3.38 | 1.12 |
| 17 | 2.69 | 1.16 |
| 18 | 2.60 | 1.07 |
| 19* | 3.46 | 1.10 |
| 20 | 4.11 | .86 |
| 21 | 3.05 | 1.14 |
| 22 | 3.47 | .93 |
| 23 | 4.01 | .94 |
| 24* | 4.11 | .83 |
| 25 | 3.58 | 1.12 |

Note: Descriptions of items are in Appendix H.

*Reverse Coded; N = 236

The *Squared Multiple Correlation* results from regressing the item on all the remaining items (Norusis, 2004). The pattern of relatively substantial values indicates that all items are measuring the same construct. The remaining values for *Cronbach's Alpha if Item Deleted* are all high and consistent, indicating none of the items are

diminishing the reliability of the scale.

Table 4.3. Reliability Analysis for the Attitudes Toward the Intersexed Scale

| Item Number | Scale Mean if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|-------------|----------------------------|----------------------------------|------------------------------|----------------------------------|
| 1 | 87.22 | .565 | .467 | .930 |
| 2 | 87.44 | .592 | .591 | .930 |
| 3 | 87.36 | .334 | .270 | .933 |
| 4* | 87.74 | .656 | .526 | .929 |
| 5 | 87.13 | .638 | .553 | .929 |
| 6* | 87.73 | .410 | .336 | .933 |
| 7 | 86.82 | .629 | .586 | .930 |
| 8 | 87.54 | .642 | .501 | .929 |
| 9 | 87.07 | .154 | .219 | .935 |
| 10 | 87.22 | .475 | .334 | .932 |
| 11 | 87.68 | .752 | .678 | .927 |
| 12 | 87.82 | .688 | .597 | .928 |
| 13 | 87.32 | .786 | .687 | .927 |
| 14 | 87.15 | .656 | .582 | .929 |
| 15 | 87.39 | .734 | .653 | .928 |
| 16* | 87.78 | .598 | .488 | .930 |
| 17 | 88.47 | .604 | .537 | .930 |
| 18 | 88.56 | .528 | .487 | .931 |
| 19* | 87.70 | .364 | .272 | .933 |
| 20 | 87.05 | .508 | .481 | .931 |
| 21 | 88.11 | .626 | .556 | .929 |
| 22 | 87.69 | .477 | .380 | .931 |
| 23 | 87.15 | .615 | .541 | .930 |
| 24* | 87.05 | .731 | .630 | .928 |
| 25 | 87.57 | .729 | .621 | .928 |

Note: Descriptions of items are in Appendix H.

*Reverse Coded. N = 236

Estimates of Item-Scale Internal Consistency for the Attitude Toward the Transgendered Scale.

For the ATT-I, $\alpha = .969$. Descriptives for each item can be found in Table 4.4. An item analysis was also conducted for this scale to assess how the individual items related to the overall scale score with the results listed in Table 4.5. The values in the *Scale Mean If Item Deleted* column are consistent, indicating that all items were

contributing more or less equally to the overall mean. The lowest *Corrected Item-Total Correlation* is .556, indicating that each of the items correlated adequately with the rest of the instrument. The *Squared Multiple Correlation* coefficients are relatively high and similar, indicating that all items are measuring the same construct. The values for *Cronbach's Alpha if Item Deleted* indicating none of the items are negatively affecting the internal reliability of the scale.

Factorial Analyses

A Principal Components Analysis was conducted on the 231 participants who responded to all 50 items of the ATAG-I.

Arrindell and van der Ende (1985) conducted a systematic analysis based on real data to ascertain guidelines for determining adequate sample size for factorial analyses. Results indicated neither the ratio of observations to variables nor an absolute minimum of observations had any influence on factor stability. Rather, for purposes of establishing a given number of true factors, sample size is related to the number of factors drawn. They concluded that stable factor solutions may be obtained when sample size is approximately 20 times the number of factors. Because a two-factor solution was of theoretical interest in the current study, the sample of 231 participants greatly exceeded these minimum guidelines.

The scree plot in Figure 4.1 graphs each component against its associated eigenvalue and suggests that the data are essentially unidimensional, although there is a definite break, albeit a very small one, in the scree line after the second component. The eigenvalues found in Table 4.6, which lists information for all components with eigenvalues greater than one, also implied unidimensionality. In the initial values, the

first eigenvalue is approximately 8.5 times the second. Additionally, the first component accounted for 45.6% of the variance, and the second only accounted for 5.4%.

Table 4.4. Item Descriptives for the Attitudes Toward the Transgendered Scale

| Item Number | Mean | Standard Deviation |
|-------------|------|-----------------------|
| 1 | 3.17 | 1.24 |
| 2 | 3.67 | 1.01 |
| 3 | 3.41 | 1.25 |
| 4* | 2.78 | 1.28 |
| 5 | 3.53 | 1.18 |
| 6* | 2.78 | 1.32 |
| 7 | 3.61 | 1.08 |
| 8 | 2.93 | 1.28 |
| 9 | 2.58 | 1.21 |
| 10 | 3.48 | 1.34 |
| 11 | 3.23 | 1.33 |
| 12 | 3.57 | 1.21 |
| 13 | 4.44 | .90 |
| 14 | 3.47 | 1.19 |
| 15 | 2.68 | 1.19 |
| 16* | 3.73 | 1.17 |
| 17 | 3.06 | 1.33 |
| 18 | 3.24 | 1.21 |
| 19* | 3.45 | 1.25 |
| 20 | 3.48 | 1.16 |
| 21 | 3.25 | 1.17 |
| 22 | 3.41 | 1.19 |
| 23 | 3.69 | 1.10 |
| 24* | 3.05 | 1.47 |
| 25 | 3.56 | 1.14 |

Note: Descriptions of items are in Appendix H.

*Reverse Coded. N = 241

Table 4.5. Reliability Analysis for the Attitudes Toward the Intersexed Scale

| Item Number | Scale Mean If Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|-------------|----------------------------|----------------------------------|------------------------------|----------------------------------|
| 1 | 80.10 | .826 | .758 | .967 |
| 2 | 79.60 | .556 | .489 | .969 |
| 3 | 79.85 | .849 | .792 | .967 |
| 4* | 80.49 | .690 | .575 | .969 |
| 5 | 79.74 | .769 | .666 | .968 |
| 6* | 80.49 | .779 | .701 | .968 |
| 7 | 79.66 | .736 | .641 | .968 |
| 8 | 80.34 | .772 | .746 | .968 |
| 9 | 80.69 | .685 | .577 | .969 |
| 10 | 79.79 | .725 | .607 | .968 |
| 11 | 80.04 | .823 | .712 | .967 |
| 12 | 79.70 | .811 | .738 | .968 |
| 13 | 78.83 | .623 | .486 | .969 |
| 14 | 79.80 | .767 | .670 | .968 |
| 15 | 80.59 | .739 | .698 | .968 |
| 16* | 79.54 | .678 | .555 | .969 |
| 17 | 80.21 | .854 | .782 | .967 |
| 18 | 80.03 | .770 | .679 | .968 |
| 19* | 79.82 | .782 | .686 | .968 |
| 20 | 79.79 | .583 | .494 | .969 |
| 21 | 80.02 | .559 | .405 | .970 |
| 22 | 79.85 | .793 | .687 | .968 |
| 23 | 79.58 | .643 | .592 | .969 |
| 24* | 80.22 | .816 | .751 | .968 |
| 25 | 79.71 | .751 | .630 | .968 |

Note: Descriptions of items are in Appendix H.

*Reverse Coded. N = 241

Because the ATAG-I is composed of two conceptually distinct scales, a second Principal Components Analysis was conducted that was constrained to a two-factor solution. A Promax oblique rotation was performed to aid in interpretation of the resulting components. The rotation converged in three iterations. The sum of the squared loadings from the two-component solution can be found in Table 4.6. Table 4.7 lists the values of the communalities after extraction and pattern matrix loadings from the rotated solution.

Figure 4.1. Scree plot of Eigenvalues of the Principal Components Analysis

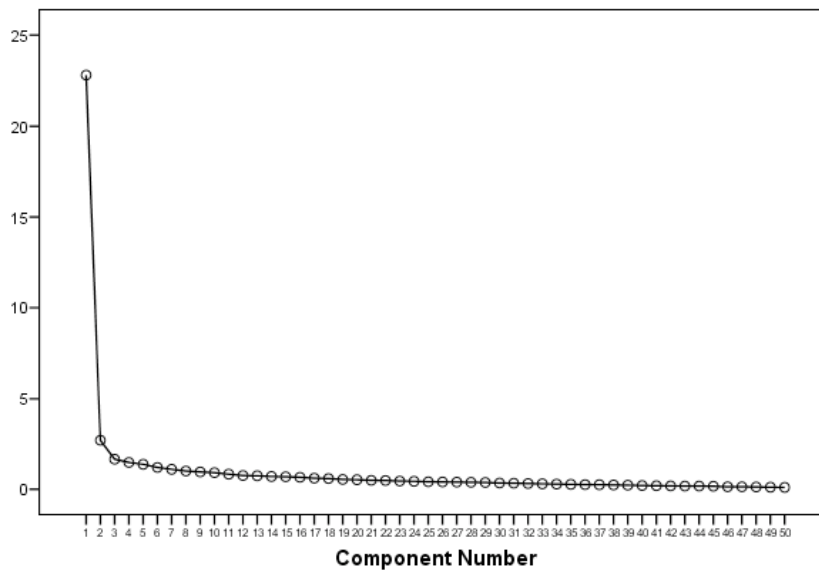


Table 4.6. Eigenvalues, Percentages of Variance and Cumulative Percentages for Eigenvalues Greater than 1 and the Sum of Squared Loadings for the Rotated Factor Solution

| Component | Total | Initial Eigenvalues | | Rotated Sum of Squared Loadings |
|-----------|--------|---------------------|--------------|---------------------------------|
| | | % of Variance | Cumulative % | |
| 1 | 22.804 | 45.607 | 45.607 | 21.362 |
| 2 | 2.677 | 5.353 | 50.960 | 17.970 |
| 3 | 1.641 | 3.283 | 54.243 | |
| 4 | 1.466 | 2.932 | 57.175 | |
| 5 | 1.365 | 2.730 | 59.905 | |
| 6 | 1.193 | 2.385 | 62.290 | |
| 7 | 1.088 | 2.176 | 64.466 | |

When constrained to a two-component solution, 41 of the 50 items loaded exactly as expected, resulting in an intersexuality component and a transgenderism component.

Of the nine items with questionable loadings, only four had higher loadings on the unexpected component:

21) I would be uncomfortable if a person who had ambiguous genitals made a sexual advance toward me (ATI-S).

24) If I found out my best male friend was born with ambiguous genitals and spent the first 10 years of his life living as a girl, I would still be friends with

him (ATI-S).

2) I do not like to be around masculine-looking women (ATT-S).

13) A man who is beaten up for walking down the street while dressed as a woman would have gotten what he deserved (ATT-S).

Of these four items, only item 13 from the ATT-S clearly loaded on the unexpected component. The other three items had low loadings of similar magnitude on both scales indicating a failure to load definitively on either scale.

The remaining five items of questionable loadings are listed below:

11) I would feel uncomfortable around a man who I knew had been born with ambiguous genitals and was raised as a girl until puberty, and then switched to living as a boy (ATI-S).

16) I would have no problem with my brother marrying a person who was identified as female at birth, and who had male chromosomes (XY) (ATI-S).

17) I would be upset if I were dating someone of the opposite sex and found out that person had the same chromosome structure as me (ATI-S).

18) I would be upset if I found out a person I was sexually attracted to had ambiguous genitals (ATI-S).

20) When I cannot tell if a person is a man or a woman, I usually assume that person is weird (ATT-S).

Each of these items had low loadings of similar magnitude on both scales, again indicating a failure to load definitively on either scale.

A series of Cronbach's alphas were computed using the results of the component loadings and compared to the alphas of the original scales. First, coefficient alphas were computed for the two scales without the nine items of questionable loadings. Specifically, all of the original intersexed items were used except for items 11, 16, 17, 18, 21, and 24, and all original transgendered items except for 2, 13, and 20. For the original ATI-S, $\alpha = .933$, while the revised scale was $\alpha = .916$. Coefficient alpha remained unchanged for the

revised ATT-S as $\alpha = .969$ for both versions of the scale. A second series of Cronbach's alpha was computed for the scales that included all 50 items with the items with the highest loadings comprising each scale. Specifically, the intersexed scale based on factor loadings contained all the original intersexed items except Items 21 and 24, and included Items 2 and 13 from the transgender scale. The transgender scale based on component loadings contained all of the original items from the transgender scale except items 2 and 13 and included items 21 and 24 from the intersexed scale. For the original ATI-S, $\alpha = .933$, while the revised scale was $\alpha = .931$. The original ATT-S, $\alpha = .969$, and the revised scale, $\alpha = .970$. Because Cronbach's alphas were essentially unchanged and because the original items made the most conceptual sense, no change was made in scale items.

Evidence of Construct Validity

It was previously argued that a similarity among attitudes toward the atypically gendered would yield evidence of construct validity. As such, a number of pertinent research questions were previously identified and included the following: Do attitudes toward homosexuals predict attitudes toward the atypically gendered? Are there systematic differences in ATAG of self-identified men and women? Do those who identify with a fundamentalist religion and attend frequent religious services hold systematically more negative attitudes toward the atypically gendered? Does knowing an atypically gendered person or having a transgendered or intersexed family member result in more positive attitudes? And finally, will etiological beliefs concerning transgenderism result in a more negative attitude toward the atypically gendered? Each of these questions was explored and the results are detailed below.

Table 4.7. Summary of Communalities and Pattern Matrix Factor Loadings for the Promax Two-Factor Solution of the Attitudes Toward the Atypically Gendered Inventory

| Item | Component Loadings | | ⁺ h ² |
|-----------------------------------|--------------------|-------------|-----------------------------|
| | 1 | 2 | |
| Items From the Intersex Scale: | | | |
| 1 | .034 | .588 | .375 |
| 2 | .084 | .584 | .417 |
| 3 | -.109 | .495 | .180 |
| 4* | .203 | .518 | .459 |
| 5 | -.119 | .808 | .531 |
| 6* | .077 | .386 | .197 |
| 7 | .032 | .671 | .482 |
| 8 | .179 | .527 | .443 |
| 9 | -.500 | .611 | .190 |
| 10 | .096 | .444 | .267 |
| 11 | .429 | .444 | .652 |
| 12 | .208 | .552 | .512 |
| 13 | .141 | .706 | .660 |
| 14 | .196 | .559 | .507 |
| 15 | -.007 | .780 | .601 |
| 16* | .296 | .388 | .401 |
| 17 | .313 | .374 | .404 |
| 18 | .300 | .309 | .316 |
| 19* | .100 | .319 | .157 |
| 20 | -.226 | .776 | .405 |
| 21 | .383 | .330 | .435 |
| 22 | .114 | .431 | .268 |
| 23 | .101 | .594 | .449 |
| 24* | .445 | .412 | .628 |
| 25 | .090 | .707 | .597 |
| Items from the Transgender Scale: | | | |
| 1 | .855 | -.011 | .717 |
| 2 | .297 | .368 | .379 |
| 3 | .944 | -.104 | .763 |
| 4* | .745 | .003 | .558 |
| 5 | .685 | .142 | .628 |
| 6* | .805 | .015 | .664 |
| 7 | .687 | .101 | .581 |
| 8 | .854 | -.058 | .663 |
| 9 | .832 | -.122 | .563 |
| 10 | .826 | -.102 | .573 |
| 11 | .812 | .041 | .709 |
| 12 | .806 | .022 | .676 |
| 13 | .295 | .454 | .483 |
| 14 | .739 | .065 | .619 |
| 15 | .880 | -.114 | .645 |

| | | | |
|------------------------|-------------|-------|------|
| 16* | .690 | .022 | .499 |
| 17 | .876 | -.003 | .764 |
| 18 | .708 | .102 | .615 |
| 19* | .825 | -.016 | .662 |
| 20 | .381 | .291 | .386 |
| 21 | .484 | .157 | .367 |
| 22 | .793 | .027 | .659 |
| 23 | .427 | .297 | .451 |
| 24* | .869 | -.035 | .712 |
| 25 | .819 | -.054 | .612 |
| Component Correlations | | | |
| Component 1 | | -- | |
| Component 2 | | .709 | -- |

Note: Boldface indicates highest component loading. Italics indicate items with questionable loadings. Descriptions of items are in Appendix H.

*Reverse Coded. ⁺h² = final communality. N = 231

Attitudes Toward Homosexuals and Attitudes Toward the Atypically Gendered.

To address these research questions, the Index of Attitudes Toward Homosexuals (Hudson & Ricketts, 1980) was given to the participants. The IAH is a paper-pencil, self-report assessment tool designed to measure the magnitude of a problem respondents have with the fear of being in close quarters with homosexuals (Walmyr Publishing Company, 1997). The instrument reflects the degree of comfort the respondent feels when associating with or being in the presence of homosexuals. The instrument is reported to consistently achieve Alpha coefficients of .9 or higher. In this sample, $\alpha = .949$ with higher scores indicating higher levels of homophobia. In this sample, scores ranged from 26 to 125 (out of a possible range of 25 to 125) with a mean of 66.88 and a standard deviation of 20.60. In comparison, the sample from Hudson and Ricketts (1980) original study that developed the IAH yielded a mean = 53.0. The distribution of scores was slightly positively skewed (skew = .410, SE = .157, $t = 2.61$, $p > .01$, two-tailed).

The correlations among the IAH, the ATI-S, and the ATT-S were computed.

Results are located in Table 4.8. Both the magnitude and the direction of the correlations

among the two ATAG-I scales with the IAH indicate a definite systematic tendency for increased homophobia to be associated with more negative attitudes toward both the intersexed and the transgendered. Additionally, it can be seen that more positive attitudes toward the intersexed is associated with more positive attitudes toward the transgendered and vice versa.

Table 4.8 Correlations Among the Index of Attitudes Toward Homosexuals, the Attitudes Toward the Intersexed Scale, and the Attitudes Toward the Transgendered Scale

| | IAH | ATI-S | ATT-S |
|---|-------|-------|-------|
| Index of Attitudes Toward Homosexuals | -- | | |
| Attitudes Toward the Intersexed Scale | -.76* | -- | |
| Attitude Toward the Transgendered Scale | -.87* | .81* | -- |

Note: * $p < .001$, two-tailed.

Gender, Religiosity, Political Affiliation, Etiological Beliefs, and Personal Contact.

Descriptives for the categories of gender, religiosity, political affiliation, etiological beliefs, and personal contact with either transgendered or intersexed persons can be found for the Index of Homophobia scale (Table 4.9), the Attitudes Toward the Intersexed Scale (Table 4.10), and the Attitudes Toward the Transgendered Scale (Table 4.11).

There were no significant differences found between male and female respondents on any of the three scales: IAH: $t(236) = .79$, $p = .43$; ATI: $t(59.54) = -1.137$, $p = .26$; ATT-S: $t(68.97) = -1.11$, $p = .272$. (The assumption of equality of variance was violated for both the ATT-S and the ATI-S; the corrected degrees of freedom are reported. All tests are two-tailed.) Because there were only three transgendered participants in the sample, they were not included in this analysis.

A series of independent samples t-tests was conducted to test for differences in

the scores of the three scales as a function of etiological beliefs concerning transgenderism and personal contact with both transgendered and intersexed individuals.

Significant differences in the scores for the three instruments were found across etiological beliefs about transgenderism. Because three tests of significance were performed for each of the three instruments, a Bonferonni adjustment was applied to control for Type 1 error. In order to maintain a familywise error rate of .05, $\alpha = .05/3 = .02$ was used. Those who believed transgenderism is a choice reported systematically more negative attitudes toward transgendered individuals than those who believed transgendered people were born that way, $t(206.65) = -11.48, p < .001, d = 1.55$. Interestingly, belief in transgenderism as a choice was also associated with more negative attitudes toward homosexuals, $t(207.97) = 10.83, p < .001, d = 1.46$) and the intersexed, $t(216) = -8.28, p < .001, d = 1.13$. (Mean values are listed in tables 4.9, 4.10, 4.11; all tests are two-tailed.) Cohen's (1988) d estimates those who believe transgenderism is a choice have on average scores that are approximately one and one-half standard deviations lower on the ATT-S, slightly over one standard deviation lower on the ATI-S, and approximately one and one-half standard deviations lower on the IAH. As a general guideline, Cohen suggested $d \approx .80$ or greater to be a large effect.

Even with no Bonferonni adjustment, no significant differences were found among any of the three scales concerning personal contact with an intersexed or transgendered person. Results from comparing the means of those who know a transgendered person to those who do not are as follows: IAH, $t(231) = -.36, p = .718$; ATI-S, $t(228) = 1.43, p = .153$; ATT-S, $t(232) = -.160, p = .873$. The results concerning

Table 4.9. Descriptives for the Index of Homophobia as a Function of Demographic Variables

| Demographic | N | Mean | SD |
|---|-----|----------------------|-------|
| Gender ⁺ : | | | |
| Male | 50 | 69.16 | 23.69 |
| Female | 187 | 66.59 | 19.60 |
| Transgender | 2 | 36.50 | 4.95 |
| Religious Identity: | | | |
| Atheist/Agnostic | 27 | 47.41 _a | 13.74 |
| Liberal | 95 | 59.79 _b | 16.41 |
| Conservative | 97 | 78.87 _{ab} | 19.62 |
| Fundamentalist | 9 | 70.33 _a | 19.09 |
| Religious Attendance: | | | |
| Never | 46 | 55.33 _a | 18.03 |
| Once/Few Times | 92 | 61.85 _b | 17.72 |
| 1-3 Times/Month | 47 | 73.79 _{ab} | 20.23 |
| Weekly or More | 53 | 79.42 _{ab} | 20.23 |
| Political Identity: | | | |
| Strongly Conservative | 6 | 101.50 _a | 18.77 |
| Conservative | 43 | 83.33 _{ab} | 20.28 |
| Moderate | 98 | 66.85 _{abc} | 17.86 |
| Liberal | 62 | 58.35 _{ab} | 15.91 |
| Strongly Liberal | 17 | 44.47 _{abc} | 11.40 |
| Political Party: | | | |
| Republican | 82 | 80.21 _a | 19.53 |
| Democrat | 96 | 59.33 _a | 18.78 |
| Independent | 40 | 58.10 _a | 16.14 |
| Libertarian | 10 | 68.00 | 15.17 |
| Etiology of Transgenderism Beliefs: | | | |
| It is a choice | 108 | 79.52* | 18.46 |
| Born that way | 116 | 54.91 | 15.24 |
| Personally know a transgendered person: | | | |
| Yes | 45 | 65.59 | 20.04 |
| No | 188 | 66.94 | 21.04 |
| Personally know an intersexed person: | | | |
| Yes | 21 | 69.76 | 24.05 |
| No | 208 | 66.94 | 20.30 |

Note: Means in a column sharing subscripts are significantly different according to Tukey's post hoc analysis of the harmonic means, $p < .05$. Higher means indicate higher levels of homophobia. ⁺Due to the small number of transgendered participants, only the means of male and female participants were tested; * $p < .001$. All tests are two-tailed.

Table 4.10. Descriptives for the Attitudes Toward the Intersexed Scales as a Function of Demographic Variables

| Demographic | N | Mean | SD |
|---|-----|-----------------------|-------|
| Gender ⁺ : | | | |
| Male | 48 | 87.96 | 20.08 |
| Female | 185 | 91.46 | 14.10 |
| Transgendered | 3 | 123.67 | 2.31 |
| Religious Identity: | | | |
| Atheist/Agnostic | 28 | 103.14 _a | 13.98 |
| Liberal | 92 | 95.11 _b | 12.64 |
| Conservative | 97 | 83.38 _{ab} | 15.91 |
| Fundamentalist | 8 | 93.13 | 13.72 |
| Religious Attendance: | | | |
| Never | 47 | 96.11 _a | 16.13 |
| Once/Few Times | 90 | 94.61 _b | 14.28 |
| 1-3 Times/Month | 44 | 85.23 _{ab} | 15.12 |
| Weekly or More | 54 | 85.61 _{ab} | 16.01 |
| Political Identity: | | | |
| Strongly Conservative | 6 | 71.10 _a | 16.07 |
| Conservative | 43 | 81.16 _b | 18.24 |
| Moderate | 95 | 90.59 _{ac} | 13.48 |
| Liberal | 60 | 95.57 _{ab} | 12.99 |
| Strongly Liberal | 18 | 106.22 _{abc} | 10.32 |
| Political Party: | | | |
| Republican | 82 | 83.67 _a | 15.32 |
| Democrat | 95 | 95.42 _a | 14.99 |
| Independent | 38 | 95.74 _a | 12.40 |
| Libertarian | 9 | 88.33 | 20.98 |
| Etiology of Transgenderism Beliefs: | | | |
| It is a choice | 107 | 83.16 | 15.71 |
| Born that way | 112 | 98.46* | 11.94 |
| Personally know a transgendered person: | | | |
| Yes | 45 | 94.20 | 16.71 |
| No | 185 | 90.42 | 15.66 |
| Personally know an intersexed person: | | | |
| Yes | 22 | 93.95 | 18.90 |
| No | 204 | 90.50 | 15.45 |

Note: Means in a column sharing subscripts are significantly different according to Tukey's post hoc analysis of the harmonic means, $p < .05$. Higher means indicate more positive attitudes toward the intersexed. ⁺Due to the small number of transgendered participants, only the means of male and female participants were tested; * $p < .001$. All tests are two-tailed.

Table 4.11. Descriptives for the Attitudes Toward the Transgendered Scale as a Function of Demographic Variables

| Demographic | N | Mean | SD |
|--|-----|-----------------------|-------|
| Gender⁺ | | | |
| Male | 51 | 79.24 | 26.50 |
| Female | 187 | 83.70 | 21.50 |
| Transgendered | 3 | 125.00 | 0.00 |
| Religious Identity | | | |
| Atheist/Agnostic | 28 | 102.54 _a | 19.05 |
| Liberal | 92 | 92.54 _b | 18.25 |
| Conservative | 99 | 69.70 _{ab} | 20.28 |
| Fundamentalist | 9 | 73.56 _{ab} | 21.90 |
| Religious Attendance | | | |
| Never | 47 | 93.70 _a | 21.04 |
| Once/Few Times | 92 | 90.14 _b | 20.16 |
| 1-3 Times/Month | 45 | 75.98 _{ab} | 22.19 |
| Weekly or More | 55 | 68.64 _{ab} | 21.07 |
| Political Identity | | | |
| Strongly Conservative | 6 | 47.50 _a | 13.23 |
| Conservative | 44 | 64.80 _b | 22.66 |
| Moderate | 98 | 82.68 _{abc} | 19.99 |
| Liberal | 59 | 93.12 _{ab} | 18.11 |
| Strongly Liberal | 18 | 108.39 _{abc} | 12.30 |
| Political Party | | | |
| Republican | 83 | 68.71 _a | 21.59 |
| Democrat | 9 | 92.82 _{ab} | 20.09 |
| Independent | 39 | 90.26 _a | 19.24 |
| Libertarian | 10 | 76.40 _b | 21.58 |
| Etiology of Transgenderism Beliefs: | | | |
| It is a choice | 111 | 69.15 | 20.67 |
| Born that way | 112 | 97.24* | 16.08 |
| Personally know a transgendered person: | | | |
| Yes | 47 | 82.89 | 25.36 |
| No | 187 | 83.50 | 22.60 |
| Personally know an intersexed person: | | | |
| Yes | 21 | 84.24 | 28.23 |
| No | 209 | 82.84 | 22.54 |

Note: Means in a column sharing subscripts are significantly different according to Tukey's post hoc analysis of the harmonic means, $p < .05$. Higher means indicate more positive attitudes toward the transgendered. ⁺Due to the small number of transgendered participants, only the means of male and female participants were tested; * $p < .001$. All tests are two-tailed.

personal contact with an intersexed person are as follows: IAH, $t(227) = .60$, $p = .552$;

ATI-S, $t(225) = .97$, $p = .332$; ATT-S, $t(228) = .27$, $p = .791$ (Mean values are located in

Tables 4.9, 4.10, and 4.11. All tests are two-tailed).

A series of one-way analyses of variance was conducted to test for differences among the categories of the religiosity and political affiliation measures. Four tests were completed for each measure. To maintain an overall familywise error rate of .05, a Bonferonni adjustment was conducted resulting in $\alpha = .05/4 = .01$. Results for the Index of Homophobia are found in Table 4.12, the Attitudes Toward the Intersexed Scale results are located in Table 4.13 and the results for the Attitudes Toward the Transgendered Scale are located in Table 4.14.

All omnibus tests were significant. Omega squared (ω^2) is provided as a measure of effect in the corresponding Tables. Omega squared is an estimate of the ratio of variability of the treatment conditions to the total variability of the dependent variable in the population (Keppel & Wichens, 2004). By taking the sampling variability into account, omega squared is adjusted for sample size and number of categories similar to adjusted R^2 in regression. As such, it provides an estimate of the size of the effect in the population from which the sample is drawn. Because it is an estimate of the ratio of variance explained to total variance, omega squared has a direct interpretation. For example, it can be seen in Table 4.12 that $\omega^2 = .284$ for the effect of religious identity on the Index of Homophobia scores, indicating that approximately 28.4% of the variance in IAH scores in the population is explained by religious identity.

Tukey's HSD post hoc analyses were performed to ascertain which means were different. Results for the IAH are located in Table 4.9, ATI-S results can be found in Table 4.10, and results from the ATT-S are in Table 4.11. The overall pattern of responses to the three scales is similar. Those participants who identify with a

Table 4.12. One-Way Analyses of Variance for the Effects of Religiosity, Political Affiliation, Etiological Beliefs, and Personal Contact on the Index of Homophobia Scale

| Variable and Source | df | SS | MS | F | ω^2 |
|------------------------------------|-----|----------|---------|--------|------------|
| Religious Identity | | | | | |
| Between | 3 | 29056.66 | 9685.55 | 30.95* | .284 |
| Within | 224 | 70097.57 | 312.94 | | |
| Attend religious service past year | | | | | |
| Between | 3 | 19040.42 | 6346.81 | 18.13* | .178 |
| Within | 234 | 81898.72 | 350.00 | | |
| Political Identity | | | | | |
| Between | 4 | 31864.16 | 7966 | 26.08* | .307 |
| Within | 221 | 305.403 | 378.71 | | |
| Political Party | | | | | |
| Between | 3 | 23124.59 | 7708.20 | 22.53* | .222 |
| Within | 223 | 49338.64 | 224.27 | | |

Note: * $p < .001$, two-tailed; Bonferroni adjustment: $\alpha = .01$; ω^2 = omega squared effect size.

Table 4.13. One-Way Analyses of Variance for the Effects of Religiosity, Political Affiliation, Etiological Beliefs, and Personal Contact on Attitudes Toward the Intersexed Scale

| Variable and Source | df | SS | MS | F | ω^2 |
|------------------------------------|-----|----------|---------|--------|------------|
| Religious Identity | | | | | |
| Between | 3 | 11347.83 | 8782.61 | 18.40* | .189 |
| Within | 221 | 45422.10 | 205.53 | | |
| Attend religious service past year | | | | | |
| Between | 3 | 5431.88 | 1810.63 | 7.82* | .080 |
| Within | 231 | 53510.42 | 231.65 | | |
| Political Identity | | | | | |
| Between | 4 | 39796.34 | 9949.09 | 14.69* | .200 |
| Within | 220 | 83316.30 | 378.71 | | |
| Political Party | | | | | |
| Between | 3 | 7175.57 | 2391.86 | 10.67* | .113 |
| Within | 223 | 49338.64 | 224.27 | | |

Note: * $p < .001$, two-tailed; Bonferroni adjustment: $\alpha = .01$; ω^2 = omega squared effect size.

fundamentalist religion and who frequently attend religious services yielded significantly more negative attitudes toward homosexual, transgendered, and intersexed individuals.

Conservatives and Republicans held more negative attitudes toward all three groups than liberals and Democrats. Those who believed transgenderism occurred as the result of choice had more negative attitudes on all three measures than those who saw it as a

congenital condition. There were no significant differences found on any of the three scales between those who personally knew a transgendered or intersexed person and those who did not.

Table 4.14. One-Way Analyses of Variance for the Effects of Religiosity, Political Affiliation, Etiological Beliefs, and Person Contact on Attitudes Toward the Transgendered Scale

| Variable and Source | df | SS | MS | F | ω^2 |
|------------------------------------|-----|----------|---------|--------|------------|
| Religious Identity | | | | | |
| Between | 3 | 37385.76 | 1241.92 | 33.14* | .297 |
| Within | 224 | 84236.92 | 376.06 | | |
| Attend religious service past year | | | | | |
| Between | 3 | 23629.10 | 7876.37 | 17.98* | .176 |
| Within | 235 | 53510.42 | 231.65 | | |
| Political Identity | | | | | |
| Between | 4 | 39796.34 | 9949.09 | 26.27* | .310 |
| Within | 220 | 83316.30 | 378.71 | | |
| Political Party | | | | | |
| Between | 3 | 28696.15 | 9565.38 | 22.60* | .221 |
| Within | 224 | 94822.87 | 423.32 | | |

Note: * $p < .001$, two-tailed; Bonferroni adjustment: $\alpha = .01$; ω^2 = omega squared effect size.

Testing for Order Effects

The order in which participants filled out the surveys (i.e., ATT-I before ATI-S and vice versa) had no effect on their total scores. Details of the independent samples *t*-tests are provided in Table 4.15.

Table 4.15. Results of the Test for Order Effects

| Survey Form | Mean | Std. Dev. | Std. Error. of the Mean | t | df | Sig (2-tailed) |
|-------------|-------|-----------|-------------------------|-------|-----|----------------|
| ATI-S | | | | | | |
| Form 1 | 90.45 | 16.44 | 1.51 | -.684 | 234 | .496 |
| Form 2 | 91.86 | 15.33 | 1.41 | | | |
| ATT-I | | | | | | |
| Form 1 | 83.77 | 23.50 | 2.16 | .325 | 239 | .745 |
| Form 2 | 82.80 | 22.64 | 2.04 | | | |

Note: Form 1 = Attitudes Toward the Intersexed Scale given first; Form 2 = Attitudes Toward the Transgendered given first.

CHAPTER FIVE

Discussion

The goal of this work was to develop a valid and reliable instrument that would assess societal attitudes toward the atypically gendered that was based on psychometric principles. This final chapter addresses the adequacy of the ATAG-I as evidenced by the obtained results, limitations of this work, and directions for future research.

RELIABILITY

A measure is reliable to the extent that an individual's score will remain the same, or nearly the same, on repeated measures (Thorndike, 1997). Evidence for the reliability of the two scales of the ATAG-I is evidenced by two factors: high reliability coefficients and low standard errors of measurement.

In this study, temporal stability was tested via the test-retest method. Of primary concern was the consistency of subjects' responses to the scale items over time. Identical questionnaires were given to the same individuals at different times. The correlation coefficient obtained by comparing the scores at time one with the scores from time two is known as the *coefficient of stability* (L. Crocker & Algina, 1986). The coefficient for both scale scores was $r(14) = .845$. By comparison, subscales for the Weschler Adult Intelligence Scale has reported coefficients in the .70s, .80s, and low .90s (Weschler, 1958); the Strong Vocabulary Interest Blank has been reported to have short-term coefficients in the .80s and long-term coefficients in the .60s (Kaplan & Saccuzzo, 1982). The obtained coefficient of .845 indicates scores have sufficient temporal stability.

Cronbach's (1951) coefficient alpha should be at least .80 to assume adequate reliability. The alpha obtained for the two scales greatly exceeded this minimum criteria,

ATI-S $\alpha = .933$; ATT-S $\alpha = .969$, indicating the scores are internally consistent.

The standard error of measurement (SEM) is the standard deviation that would be obtained for a series of measurements of the same individual and provides an estimate of measurement error (Thorndike, 1997). It is a function of the standard deviation of the test scores and the coefficient of stability obtained from the test-retest data. The SEMs were quite similar for both the ATI-S and the ATT-S: $SEM_{ATI-S} = 6.15$ and $SEM_{ATT-S} = 7.46$. This indicates that individuals' scores will fall within a range of around plus or minus 12 points of their true scores approximately 95% of the time for the ATI-S, and around plus or minus 15 points on the ATT-S. There are 25 items in each scale of the ATAG-I that are scored on a 1 – 5 scale, resulting in scores that can range from 25 – 125. In this context, the SEMs are reasonably low.

Given the presence of high reliability coefficients coupled with low standard errors of measurement, the ATAG-I appears to be an excellent scale in terms of its measurement error characteristics.

CONSTRUCT VALIDITY

The construct validity of the ATAG-I was evaluated from several perspectives. These included the retranslation tasks, factorial analyses, and a comparison of the Index of Homophobia responses with the responses to both scales of the ATAG-I. A discussion of each of these is follows.

Retranslation Tasks

Feedback from the atypically gendered experts indicated a general consensus that the items *looked* as if they were indeed measuring what they claimed to be measuring, providing evidence of face validity.

With only a few exceptions, the vast majority of the 50 items of the ATAG-I were correctly classified by most participants of the retranslation tasks, which provided preliminary evidence of content validity. If in reality ATAG were not the result of a composition of attitudes toward the intersexed and attitudes toward the transgendered, the participants would have been unable to retranslate the items back into the original two scales with such a high level of success. Additionally, the ability of a majority of the subjects to correctly classify most items provided preliminary evidence that the two scales are in actuality conceptually distinct.

Factorial Analysis

The resulting component structure from the Principal Components Analysis ultimately supported the validity of the ATAG construct in a number of ways. It was argued that ATAG is conceptually an overarching construct that includes both attitudes toward the intersexed and attitudes toward the transgendered. The general unidimensional nature of the data confirms that ATI and ATT are indeed parts of the same construct. Even within the context of unidimensionality of the data, however, the pattern of factor loadings indicate a definite structure within these data that lends support to the notion that the two scales are distinct.

The Index of Homophobia and the ATAG-I

The construct validity of the ATAG-I was also examined by comparing attitudes toward homosexuals with attitudes toward the atypically gendered. Although it was not possible to formally hypothesize expected levels of relationships, a similarity of attitudes was expected.

A number of criterion variables were used. It is generally accepted that on average

more negative attitudes toward homosexuals are held by men, by those who adhere to a fundamentalist religion, by political conservatives, by those who do not personally know a gay person, and by those who believe that homosexuality is a choice.

Generally, these patterns held for ATAG. More negative attitudes were held by those who self-identified as being religiously conservative and who attended religious services one to three times per month or more. Those who identified as politically conservative or strongly conservative held the more negative attitudes than liberals. Republicans had more negative attitudes than Democrats and Independents. Those who believed that transgenderism is a choice held more negative views toward both the transgendered and the intersexed.

Breaking from the known patterns of responses of attitudes toward homosexuals were gender differences and personal contact. There is an accepted trend for men to be more homophobic on average than women. This was not the case however with this sample as no significant difference was found between men and women on the IAH. There were also no differences in attitudes toward either the intersexed or the transgendered between the binary sexes. Additionally, there were no differences in attitudes between those who personally knew an intersexed or transgendered person and those who did not.

Although no formal hypotheses of the relationships between the aforementioned characteristics and ATAG was provided a priori, a similarity of attitudes between those held toward homosexuals, the intersexed, and the transgendered was expected and the findings provide evidence of construct validity.

LIMITATIONS OF THE CURRENT STUDY

One of the most notable limitations of this study is the composition of the sample, which is quite homogeneous on a number of levels. First, the vast majority of the respondents were female, with males only constituting approximately 21% of the entire sample. Second, the sample was almost entirely devoid of minorities. Although race was not included in the demographic questionnaire, it is estimated from observation that the number of Caucasian participants was well over 80% and quite possibly over 90%. Third, approximately 83% of the sample was age 18 to 25. Finally, with only five exceptions, the sample consisted of college students. The purpose of the sample was to provide a means to examine the reliability and validity of the Attitudes Toward the Atypically Gendered Inventory and it was never intended to represent a well-defined population. For this purpose, the sample is believed to have been adequate. However, scores from more diverse samples are needed before it can be assumed that reliability coefficients are stable among disparate groups of respondents.

Although the large sample was sufficient for the statistical analyses that were computed, a larger, more diverse sample would have been advantageous. As a case in point, several of the comparisons that were made were done on relatively small subgroups of participants. For example, only 6 participants self-identified as *strongly conservative* and only 19 identified as *strongly liberal*. It is questionable whether the means from these few have provided an adequate representation of the attitudes found within the population of American society.

There is reason to believe that measurement error may have hindered the validity of some of the demographic items. When distributing the questionnaire, several

participants asked for clarification of some the terms used. Concerning political identity, several participants indicated they were unsure of the meaning of *liberal* and *conservative*. During these instances, it was noticed that several participants in the general vicinity stopped to listen as if they too were unsure of the meanings. Answers to these inquiries were kept intentionally vague so as not to unduly influence their responses. Generally, something along the lines of, “Those are descriptions of political ideologies,” was all that was given. One participant became quite angry and stated something along the lines of, “You have to tell me! I don’t know if I’m conservative or liberal! You have to tell me!” At this point another participant responded to her by name and said, “You’re a liberal.” That seemed to satisfy her and she proceeded to fill out the questionnaire, presumably responding *liberal* to that item. In future studies, existing questionnaires designed to assess religiosity and political ideology that yield scores with acceptable levels of reliability need to be utilized.

A number of people had questions about the item concerning religious identity (*Which of the following best describes your religious identity: Atheist/Agnostic; Liberal; Conservative; Fundamentalist*) This item was chosen because it could apply to any religious sect thereby getting at the crux of the issue at hand. The concern was not with differences in religions (e.g., Are there differences in ATAG among Jews, Christians, and Muslims?), but rather, with the differences among degree of religious adherence. Again, a number of participants struggled with the concepts of *liberal* and *conservative*, but even more seemed to have trouble with the notion of *fundamentalist*. More than one person asked for clarification on *agnostic*. There may have been confusion even among some of those who thought they understood the terms. When one person asked for clarification on

the meanings of politically liberal and conservative, another participant volunteered that *liberals were open-minded and conservative are not*. There appeared to be confusion regarding the question of sexual orientation as well, as quite a few asked for the meaning of *asexual*.

Unfortunately, records were not kept on how many of these questions were asked and an accurate estimate on the actual frequencies is difficult to gauge. Although only a relatively few people asked for clarification, there were too many to write off as isolated incidents. If these few people were admitting to their confusion, how many others were unclear as well? In light of this, it is prudent to question if the responses to these items are capturing what was intended. Given the amount of confusion these items elicited, they are a definite shortcoming in the present study.

Out of the 253 participants, 48 reported personally knowing a transgendered person and 24 reported knowing a person with an intersexed condition. Although data is not readily available that suggests how many people might be expected to know an atypically gendered person, these numbers are surprisingly high, particularly for those claiming to know an intersexed person. As such, it is prudent to question the accuracy of these numbers.

IMPLICATIONS FOR FUTURE STUDY

The goal of this work was to develop a valid and reliable instrument that would assess societal attitudes toward the atypically gendered that was based on psychometric principles. The goal has been met. Studies utilizing the ATAG-I are now needed across diverse samples so that a richer understanding of the nature of attitudes toward the atypically gendered may be realized.

This is an important area of inquiry for a number of reasons. For example, many current medical practices concerning the management of intersexed infants are based around the assumption that parents will have problems bonding with infants who do not appear unambiguously male or female, an assumption not based on empirical evidence. In this sample, only 5.5% of participants responded with some level of agreement to the item, *I would have trouble bonding with a son whose genitals did not look like a penis*, while 74.3% responded with some level of disagreement. Similarly, 12% responded with some level of agreement to the item, *I would have trouble bonding with an infant daughter who had a large, penis-shaped clitoris*, while approximately 63% responded with some level of disagreement. If similar results are replicated in further studies, it might be concluded that close to 100% of ambiguously born babies are undergoing major invasive procedures to ensure adequate parent/infant bonding for a relatively small number of parents. Such a finding certainly lends credence to the argument that working with the parents' issues directly is preferable to surgically altering these babies' appearances. Additionally, the differences in the frequency of responses between these two items is more than would be expected by chance alone, $\chi^2(16) = 239.91, p < .001$, two-tailed, indicating that physically ambiguous female infants may elicit more negative attitudes than physically ambiguous males. These findings beg for further analysis.

Only 7% agreed with the statement, *A male infant born with a penis that will never allow him to urinate standing should have surgery on his penis to let him stand even if it may result in little or no sexual feeling as an adult*, while approximately 65% indicated some level of disagreement. Slightly less than 3% agreed with the statement, *A newborn boy with a penis so small he would never be able to urinate standing should*

undergo a sex change operation and be raised as a girl, while almost 71% disagreed.

These results stand in staunch contrast to current and past medical practices.

On the transgendered side, slightly over 40% agreed with, *I would not want my young son to be alone with a woman who used to be a man*, while almost 37% disagreed.

In contrast, almost 49% agreed with, *I would not want my young daughter to be left alone with a woman who had undergone a sex change operation and was currently living as a man*, while slightly over 28% disagreed. Due to the high level of agreement to these

scenarios, it was wondered how the individuals who had relatively positive attitudes toward the transgendered felt about leaving their young children alone with transsexuals.

No cut score has been suggested to differentiate those with positive attitudes from those with negative attitudes. The 50th percentile fell at a score of 85 for the ATT-S.

Frequencies for these items for the half of the sample with more positive attitudes were as follows: Approximately 9% had some level of agreement with not wanting their young son left alone with a woman who used to be a man, while almost 69% disagreed; slightly over 18% agreed with not wanting their young daughter left alone with a post-operative male-to-female, while almost 54% disagreed. To further explore, the total ATT-S score was regressed on both of these items. The overall regression model was significant ($F(2, 238) = 267.21, p < .001$, two-tailed) as were both predictors. Results of the regression analysis are provided in Table 5.1. Additional study is needed to further explore the nature of these patterns and to see if they are stable across diverse groups of people.

The above examples illustrate the potential for future research. The instrument does appear to have good construct, content, and factorial validity as well as high internal consistency and low standard errors of measurement indicating high reliability. As a

result, the ATAG-I has the potential to become a useful tool in these areas of research.

Table 5.1. Results of the Regression Analysis Predicting Total ATT-S Score From Two Items Pertaining to Children

| | <i>B</i> | <i>SEB</i> ⁺ | β |
|--|----------|-------------------------|---------|
| Constant | 35.43 | 2.14 | |
| I would not want my young son to be alone with a woman who used to be a man. | 10.30 | .80 | .57* |
| I would not want my young daughter to be left alone with a woman who had undergone a sex change operation and was currently living as a man. | 6.02 | .05 | .35* |

Note: $R^2 = .84$; Adjusted $R^2 = .71$; ⁺ Standard Error of B; * $p < .001$.

IMPLICATIONS FOR RESEARCH-BASED EDUCATION

We as a society have constrained sex and gender to a strict dichotomy and as a result many individuals have been subsequently left out. For too long, the response to those who transcend the binary has been an attempt to force them, either through multiple invasive medical procedures and/or reparative-type psychotherapies, to fit into a dichotomous paradigm that by its very design excludes them. Perhaps a better alternative would be to ultimately expand our view of that part of human experience referred to as sex and gender to go beyond our current binary system to one capable of including all persons. A first step toward this goal must include education.

It is vital that education be evidence-based as too much of the current discourse concerning the atypically gendered is not based on empirical evidence. Consider, for example, that current medical management protocol concerning intersexuality revolves around the notion that the very presence of physical ambiguity constitutes a social emergency (American Academy of Pediatrics, 2000). More specifically, it is believed that parents will have difficulty bonding with a child who is not clearly male or female. The implication here is obvious: If parents cannot bond to their own ambiguously sexed child, what chance does that individual have in achieving any level of societal acceptance?

Given this mindset, the rationale for current medical management falls neatly into place: Take all necessary steps to eradicate the ambiguity. However, the rationales undergirding this position are based on assumptions, not empirical evidence.

An education program concerning the atypically gendered that is based on evidence, not simple blind adherence to the dichotomous paradigm, is warranted. Medical professionals, parents, and educators, as well as the atypically gendered themselves, are but a few of the groups that would benefit from such a program.

A starting point may include large-scale assessments of currently existing attitudes toward the atypically gendered. A thorough understanding of ATAG can direct the nature of educational programs aimed at enlightening the general population of the existence, and the normalcy, of those who exist outside of the traditionally held definitions of man and woman.

CONCLUSIONS

There is a longstanding cultural belief in some kind of natural link between anatomical sex and the characteristic of one's psyche (Bem, 1995). Those who transcend the binary continue to struggle as long as society continues to cling to its current dichotomous notion of sex and gender and infants born with atypical anatomies will still be subject to radical medical interventions often resulting in lifelong complications. Non-complaining, gender variant children will continue to be labeled as 'disordered' and forced into reparative therapies. Gender variant adults will continue to risk violence and struggle to find their place in a dichotomist society. Drawing from interviews with 65 male-to-female transgendered individuals, Gagne et al. (1997) found the most common theme for the individuals interviewed was a stated desire for acceptance, to simply be

known as just another person. And finally, unless things change non-intersexed, non-transgendered individuals will continue to have the social expectations, gender roles, and hierarchical limitations inherent in a binary system thrust upon them. As a result, men will continue to be encouraged to disregard their feminine characteristics, and women their masculine ones, which ultimately restricts all people to half of their humanity (Bem, 1995). Perhaps the study of attitudes toward persons who are atypically gendered will help to open the discourse concerning the individuals who make up these populations and ultimately lead to a broader and richer conception of humanity for all (McQueen, 2006).

References

- Aberson, C. L., Healy, M., & Romero, V. (2000). Ingroup bias and self-esteem: A meta-analysis. *Personality and Social Psychology Review*, 4(2), 157-173.
- Agenda. (October 31, 1995). The Advocate, 11.
- Aiken, L. R. (2002). *Attitudes and related psychosocial constructs: theories, assessment, and research*. Thousand Oaks, CA: Sage.
- Allport, G. W. (1935). Attitudes. In C. Murchison (Ed.), *A handbook of social psychology* (pp. 798-844). Worcester: Clark University Press.
- Allport, G. W. (1966). Attitudes in the history of social psychology. In M. Jahoda & N. Warren (Eds.), *Attitudes*. Baltimore: Penguin.
- Allport, G. W. (1979). *The Nature of prejudice, unabridged* (25th Anniversary ed.). Cambridge MA: Perseus.
- American Academy of Pediatrics. (2000). Evaluation of the newborn with developmental anomalies of the external genitalia. *Pediatrics*, 106(1), 138-142.
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3 ed.). Washington, DC: Author.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3-R ed.). Washington, DC: Author.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (Fourth Edition, Text Revision ed.). Washington, DC: American Psychiatric Association.
- Androgen Insensitivity Syndrome Support Group [AISSG]. (2002, Oct 3). Complete AIS. Retrieved November 23, 2005, from <http://www.medhelp.org/www/ais/>

- Arrindell, W. A., & van der Ende, J. (1985). An empirical test of the utility of the observations-to-variables ratio in factor and components analysis. *Applied Psychological Measurement, 9*(2), 165-178.
- Baker, H. J. (1968). Transsexualism: Problems in treatment. *American Journal of Psychiatry, 125*(10), 1412-1418.
- Baldwin, J. M. (1901). *Dictionary of philosophy and psychology*. New York: Macmillan.
- Bartlett, N. H., Vasey, P. L., & Bukowski, W. M. (2000). Is gender identity disorder in children a mental disorder? *Sex Roles: A Journal of Research, 753-773*.
- Bem, S. L. (1995). Working on gender as a gender-nonconformist. *Women & Therapy, 17*(1-2), 43-53.
- Benjamin, H. (1966). *The transsexual phenomenon*. New York: Julian Press.
- Berk, R. A., Boyd, E. A., & Hamner, K. M. (1992). Thinking more clearly about hate-motivated crimes. In G. M. Herek & K. T. Berrill (Eds.), *Hate crimes: Confronting violence against lesbians and gay men* (pp. 123-143). Newbury Park, CA: Sage.
- Bernard, H. R. (1994). *Research methods in anthropology*. Thousand Oaks, CA: Sage.
- Blackless, M., Charuvastra, A., Derryck, A., Fausto-Sterling, A., Lauzanne, K., & Lee, E. (1997). How sexually dimorphic are we? *American Journal of Human Biology, 12*, 151-166.
- Blackwood, E. (1988). Review of "The spirit and the flesh: Sexual diversity in American Indian culture" by Walter L. Williams. *Journal of Homosexuality, 15*(3/4), 165-175.

- Blanz, M., Mummendey, A., & Otten, S. (1955). Positive-negative asymmetry in social discrimination: The impact of stimulus valence and size and status differential on intergroup evaluations. *British Journal of Social Psychology, 34*, 409-419.
- Bogardus, E. S. (1925). Measuring social distance. *Sociology and Social Research, 9*, 299-308.
- Bomalaski, M. D. (2005). A practical approach to intersex. *Urologic Nursing, 25*(1), 11-24.
- Bradley, S. J., & Zucker, K. J. (1997). Gender identity disorder: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*(7), 872-880.
- Brewer, M. B. (1999). The psychology of prejudice: Ingroup love or outgroup hate. *Journal of Social Issues, 55*(3), 429-444.
- Brown, J. D., Collins, R. L., & Schmidt, G. W. (1988). Self-esteem and direct versus indirect forms of self-enhancement. *Journal of Personality and Social Psychology, 55*(3), 445-453.
- Butler, J. (1999). *Gender trouble: feminism and the subversion of identity*. New York: Routledge.
- Campbell, D. T. (1966). Acquired behavioral dispositions. In M. Jahoda & N. Warren (Eds.), *Attitudes*. Baltimore: Penguin.
- Cantril, H. (1934). Attitudes in the making. *Understanding the Child, 4*, 13-15.
- Carlson, A. (1991). When is a woman not a woman? *Women's Sports & Fitness 13*, 24-29.

- Carroll, L., Gilroy, P. J., & Ryan, J. (2002). Counseling transgendered, transsexual, and gender-variant clients. *Journal of Counseling & Development, 80*, 131-139.
- Castro-Magana, M., Angulo, M., & Collipp, P. (1984). Management of the child with ambiguous genitalia. *Medical Aspects of Human Sexuality, 18*(4), 172-188.
- Chein, I. (1948). Behavior theory and the behavior of attitudes: Some critical comments. *Psychological Review, 55*, 175-188.
- Chung, W. C. J., Vries, G. J. D., & Swaab, D. F. (2002). Sexual differentiation of the bed nucleus of the stria terminalis in humans may extend into adulthood. *The Journal of Neuroscience, 22*(3), 1027-1033.
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in scale development. *Psychological Assessment, 7*, 309-319.
- Clark, M. J. (1994). The "third gender": Implications for men's studies and eco-theology. *Journal of Men's Studies Press, 2*(3), 239.
- Coates, S. (1992). The etiology of boyhood gender identity disorder: An integrative model. In J. W. Barron, M. N. Eagle & D. L. Wolizky (Eds.), *Interface of psychoanalysis and psychology* (pp. 245-265). Washington, DC: American Psychological Association.
- Cochran, B., Stewart, A., Ginzler, J., & Cause, A. (2002). Challenges faced by homeless sexual minorities: Comparison of gay, lesbian, bisexual, and transgender homeless adolescents with their heterosexual counterparts *American Journal of Public Health, 92*(5), 773-777.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

- Cohen-Kettenis, P. T., & Gooren, L. J. G. (1999). Transsexualism: A review of etiology, diagnosis and treatment. *Journal of Psychosomatic Research*, 46(4), 315-333.
- Cohen-Kettenis, P. T., & van Goozen, S. (1997). Sex reassignment of adolescent transsexuals: A follow-up study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36(2), 263-271.
- Conway, J. M. (2003). A review and evaluation of exploratory factor analysis practices in organizational research. *Organizational Research Methods*, 6(2), 147-168.
- Cook-Daniels, L. (1997). Lesbian, gay male, bisexual and transgendered elders: elder abuse and neglect issues. *Journal of Elder Abuse and Neglect*, 9(2), 35-49.
- Coolidge, F. L., Thede, L. L., & Young, S. E. (2002). The heritability of gender identity disorder in a child and adolescent twin sample. *Behavior Genetics*, 32(4), 251-257.
- Cooper, J. B., & McGaugh, J. L. (1966). Attitude and related concepts. In M. Jahoda & N. Warren (Eds.), *Attitudes*. Baltimore: Penguin.
- Creighton, S. M. (2000). Surgery for intersex. *Journal of the Royal Society of Medicine*, 94, 218-220.
- Crocker, J., & Luhtanen, R. (1990). Collective self-esteem and ingroup bias. *Journal of Personality and Social Psychology*, 58(1), 60-67.
- Crocker, L., & Algina, J. (1986). *Introduction to classical and modern test theory*. Belmont CA: Wadsworth Group/Thomson Learning.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.

- Crouch, R. A. (1998). Betwixt and between: The past and future of intersexuality. In A. D. Dreger (Ed.), *Intersex in the age of ethics* (pp. 29-49). Hagerstown, MD: University Publishing Group.
- Dessens, A. B., Cohen-Kettenis, P. T., Mellenbergh, G. J., Poll, N. v. d., Koppe, J. G., & Boer, K. (1999). Prenatal exposure to anticonvulsants and psychosexual development. *Archives of Sexual Behavior*, 28(1), 31-39.
- Devore, H. (1998). Growing up in the surgical maelstrom. In A. D. Dreger (Ed.), *Intersex in the age of ethics* (pp. 79-81). Hagerstown, MD: University Publishing Group.
- Diamond, J. (1992). Turning a man. *Discover*, 13, 70-77.
- Doering, R. W., Zucker, K. J., Bradley, S. J., & MacIntyre, R. B. (1989). Effects of neutral toys on sex-typed play in children with gender identity disorder. *Journal of Abnormal Child Psychology*, 17(5), 563-574.
- Doob, B. W. (1947). The behavior of attitudes. *Psychological Review*, 54(3), 135.
- Doorbar, R. R. (1969). Psychological testing of male transsexuals: A brief report of results from the Wechsler Adult Intelligence Scale, the Thematic Apperception Test, and the House-Tree-Person Test. In R. Green & J. Money (Eds.), *Transsexualism and sex reassignment*. Baltimore: The Johns Hopkins Press.
- Dreger, A. D. (1999a). A history of intersex: From the age of gonads to the age of consent. In A. D. Dreger (Ed.), *Intersex in the age of ethics* (pp. 5-22). Hagerstown, MD: University Publishing Group.
- Dreger, A. D. (Ed.). (1999b). *Intersex in the age of ethics*. Hagerstown, MD: University Publishing Group, Inc.
- Droba, D. D. (1933). The nature of attitude. *Journal of Social Psychology*, 32, 444-463.

- Dzelme, K., & Jones, R. A. (2001). Male cross-dressers in therapy: A solution-focused perspective for marriage and family therapists. *The American Journal of Family Therapy, 29*, 293-305.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4*(3), 272-299.
- Fausto-Sterling, A. (1993a, March 12). How many sexes are there? *New York Times*, p. A29.
- Fausto-Sterling, A. (1993b). The five sexes: Why male and female are not enough. *The Sciences* (March-April), 20-24.
- Fausto-Sterling, A. (2000). *Sexing the body: Gender politics and the construction of sexuality*. New York: Basic Books.
- Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality and Social Psychology, 73*(1), 31-55.
- Friend, R. A. (1993). Choices, not closets: heterosexism and homophobia in schools. In L. Weis & M. Fine (Eds.), *Beyond silenced voices: class, race, and gender in U.S. schools* (pp. 209-235). NY: SUNY Press.
- Gagne, P., Tewksbury, R., & McGaughey, D. (1997). Coming out and crossing over: Identity formation and proclamation in a transgender community. *Gender & Society, 11*(4), 478-508.
- Glenn, N. D., & Weaver, C. N. (1979). Attitudes toward premarital, extramarital and homosexual relations in the U. S. in the 1970s. *Sex Roles, 15*, 108-118.

- Grady, D. (1992). Sex test of champions. *Discover*, 13, 78-82.
- Green, R. (1987). *The "sissy boy syndrome" and the development of homosexuality*. New Haven, CT: Yale University Press.
- Groveman, S. A. (1999). The Hanukkah bush: Ethical implications in the clinical management of intersex. In A. D. Dreger (Ed.), *Intersex in the age of ethics* (pp. 23-28). Hagerstown MD: University Publishing Group.
- Guttman, L. (1944). A basis for scaling qualitative data. *American Sociological Review*, 9(2), 139-150.
- Harry, J. (1990). Conceptualizing anti-gay violence. *Journal of Interpersonal Violence*, 5(3), 350-358.
- Hartley, L. M. (2005). The tempest over sex identity. *Trans-Health: The Online Magazine of Health and Fitness for Transsexual and Transgendered People*. Retrieved September 26, 2005, from <http://www.trans-health.com/displayarticle.php?aid=37>
- Hausman, B. L. (2000). Do boys have to be boys? Gender, narrativity, and the John/Joan case. *NWSA*, 12(3), 114-138.
- Herek, G. M. (1984). Attitudes toward lesbians and gay men: A factor analytic study. *Journal of Homosexuality*, 10(1/2), 39-51.
- Herek, G. M. (1990). The context of anti-gay violence: Notes on cultural and psychological heterosexism. *Journal of Interpersonal Violence*, 5(3), 316-333.
- Herek, G. M. (1992a). Psychological heterosexism and anti-gay violence: The social psychology of bigotry and bashing. In G. M. Herek & K. T. Berrill (Eds.), *Hate*

crimes: Confronting violence against lesbians and gay men (pp. 149-169).

Newbury Park, CA: Sage.

Herek, G. M. (1992b). The social context of hate crimes: Notes on cultural heterosexism.

In G. M. Herek & K. T. Berrill (Eds.), *Hate crimes: Confronting violence against lesbians and gay men* (pp. 89-104). Newbury Park, CA: Sage Publications.

Herek, G. M. (1994). Assessing attitudes toward lesbians and gay men: A review of empirical research with the ATLG scale. In B. Greene & G. M. Herek (Eds.), *Lesbian and gay psychology* (Vol. 206-228). Thousand Oaks, CA: Sage.

Herek, G. M. (2000a). Sexual prejudice and gender: Do heterosexuals' attitudes toward lesbians and gay men differ? *Journal of Social Issues*, 56(2), 251-266.

Herek, G. M. (2000b). The psychology of sexual prejudice. *Current Directions in Psychological Research*, 9(1), 19-22.

Herek, G. M. (2006). Definitions: Homophobia, heterosexism, and sexual prejudice [Electronic Version]. Retrieved January 25, 2007 from http://psychology.ucdavis.edu/rainbow/html/prej_defn.html.

Herek, G. M., & Capitano, J. (1995). Black heterosexuals' attitudes toward lesbians and gay men in the United States. *Journal of Sex Research*, 32(2), 95-105.

Herek, G. M., & Capitano, J. (1996). "Some of my best friends": Intergroup contact, concealable stigma, and heterosexuals' attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin*, 22(4), 412-424.

Hill, D. B. (2002). Genderism, transphobia, and gender bashing: A framework for interpreting anti-transgender violence. In B. Wallace & R. Carter (Eds.),

- Understanding and dealing with violence: A multicultural approach* (pp. 113-136). Thousand Oaks, CA: Sage.
- Hill, D. B., & Willoughby, B. L. B. (2005). The development and validation of the genderism and transphobia scale. *Sex Roles, 53*(7/8), 531-544.
- Hird, M. J. (2002). For a sociology of transsexualism. *Sociology, 36*(3), 577-595.
- Hogg, M. A., & Abrams, D. (1990). Social motivation, self-esteem, and social identity. In D. Abrams & M. A. Hogg (Eds.), *Social identity theory: Contract and critical advances* (pp. 28-47). New York: Springer-Verlag.
- Horn, S. S. (2006). Heterosexual adolescents' and young adults' beliefs and attitudes about homosexuality and gay and lesbian peers. *Cognitive Development, 21*(4), 420-440.
- Hudson, W. W., & Ricketts, W. A. (1980). A strategy for the measurement of homophobia. *Journal of Homosexuality, 5*(4), 357-372.
- Intersex Society of North America [ISNA]. Retrieved November 23, 2005, from <http://www.isna.org/>
- Izquierdo, G., & Glassberg, K. I. (1993). Gender assignment and gender identity in patients with ambiguous genitalia. *Urology, 42*, 232-242.
- Jahoda, M., & Warren, N. (1966). Introduction. In M. Jahoda & N. Warren (Eds.), *Attitudes*. Baltimore: Penguin.
- Johnson, S. L., & Hunt, D. D. (1990). The relationship of male transsexual typology to psychosocial adjustment. *Archives of Sexual Behavior, 19*(4), 349-360.
- Jorgensen, C. (1967). *Christine Jorgensen: A personal autobiography*. San Francisco: Cleis Press.

- Kaplan, R. M., & Saccuzzo, D. P. (1982). *Psychological testing principles, applications, and issues*. Monterey, CA: Brooks/Cole.
- Keppel, G., & Wiczens, T. D. (2004). *Design and analysis: A researcher's handbook* (4th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Kerr, P. S., & Holden, R. R. (1996). Development of the gender role beliefs scale (GRBS). *Journal of Social and Personality, 11*(5), 3-16.
- Kessler, S. J. (1998). *Lessons From the intersexed*. Chicago: The University of Chicago.
- Kessler, S. J., & McKenna, W. J. (1978). *Gender: An ethnomethodological approach*. New York: John Wiley & Sons.
- Kinsey, A. C., Pomeroy, W. B., & Martin, C. E. (1948). *Sexual behavior in the human male*. Philadelphia, PA: W. B. Saunders.
- Kite, M. E., & Whitley, B. E. J. (1998). Do heterosexual women and men differ in their attitudes toward homosexuality? A conceptual and methodological analysis. In G. M. Herek (Ed.), *Stigma and sexual orientation: Understand prejudice against lesbians, gay men, and bisexuals* (pp. 39-61). Newbury Park, CA: Sage.
- Landén, M., & Innala, S. (2000). Attitudes toward transsexualism in a Swedish national survey. *Archives of Sexual Behavior, 29*(4), 375-388.
- Laqueur, T. (1990). *Making sex: body and gender from the Greeks to Freud*. Cambridge, MA: Harvard University Press.
- Larsen, K. S., Reed, M., & Hoffman, S. (1980). Attitudes of heterosexuals toward homosexuality: A Likert-type scale and construct validity. *The Journal of Sex Research, 16*(3), 245-257.

- Lee, P. A., Houk, C. P., Ahmed, S. F., & Hughes, I. A. (2006). Consensus statement on management of intersex disorders. *Pediatrics*, *118*, 488-500.
- Leitenberg, H., & Slavin, L. (1983). Comparison of attitudes toward transsexuality and homosexuality. *Archives of Sexual Behavior*, *12*(4), 337-346.
- Leung, S. O., & Sachs, J. (2005). Bhargava and Ishizuka's BI-Method: A neglect method for variable selection. *The Journal of Experimental Education*, *73*(4), 353-367.
- Levitt, E. E., & Klassen, A. D. (1974). Public attitudes toward homosexuality. *Journal of Homosexuality*, *1*(29-43).
- Lorber, J. (1994). *Paradoxes of gender*. New Haven: Yale University.
- Love, H. (2004). 'The right to change my mind': New work in trans studies. *Feminist Theory*, *5*(5), 1.
- Lucal, B. (1999). What it means to be gendered me: Life on the boundaries of a dichotomous gender system. *Gender & Society*, *13*(6), 781-797.
- Matza, D. (1964). *Delinquency and drift*. New York: John Wiley & Sons.
- McFalls, J. A. J., Gallagher, B. J., Halluska, M., & Prince, J. (2006). Attitudes of psychiatrists concerning the nature and causes of transsexuals: A national survey. *Psychology and Education*, *43*(1), 26-33.
- McQueen, K. S. (2006). Breaking the gender dichotomy: The case for transgender education in school curriculum [Electronic Version]. *Teachers College Record*. Retrieved August 29, 2006 from <http://www.tcrecord.org>.
- Meddin, J. (1975). Attitudes, values and related concepts: A system of classification. *Social Science Quarterly*, *55*(4), 889-900.

- Meyenburg, B. (1999). Gender identity disorder in adolescence: Outcomes of psychotherapy. *Adolescence*, 34(134), 305-313.
- Meyer-Bahlburg, H. F. L. (2002). Gender identity disorder in young boys: A parent- and peer-based treatment protocol. *Clinical Child Psychology & Psychiatry*, 7(3), 360-377.
- Money, J., & Ehrhardt, A. (1972). *Man & woman boy & girl: The different and dimorphism of gender identity from conception to maturity*. Baltimore, MD: The Johns-Hopkins University Press.
- Moulton, J. L., & Adams-Price, C. E. (1997). Homosexuality, heterosexuality, and cross-dressing: Perceptions of gender discordant behavior. *Sex Roles*, 37(5/6), 441-450.
- Mufioz-Plaza, C., Quinn, S., & Rounds, K. (2002, Apr/May 2002). Lesbian, gay, bisexual and transgender students: Perceived social support in the high school environment. *The High School Journal*, 52-63.
- Murphy, G., & Murphy, L. B. (1931). *Experimental social psychology*. New York: Harpers.
- Murphy, G., Murphy, L. B., & Newcomb, T. M. (1937). *Experimental social psychology*. New York: Harpers.
- Newman, K., Randolph, J., Y Anderson, K. (1992). The surgical management of infants and children with ambiguous genitalia. *Annals of Surgery*, 215(6), 644-653.
- Norusis, M. J. (2004). *SPSS 12.0: Statistical procedures companion*. Upper Saddle River, NJ: Prentice Hall.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

- Organisation Intersex International. (2006). The DSD Chronicles. Retrieved December 16, 2006, from <http://oii-usa.blogspot.com/2006/10/dsd-chronicles.html>
- Parker, L. A. (1998). Ambiguous genitalia: Etiology, treatment and nursing implications. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 27, 15-22.
- Pike, C. K. (1996). Development and initial validation of the social work values inventory. *Research on Social Work Practice*, 6(3), 337-352.
- Plous, S. (2003). The psychology of prejudice, stereotyping, and discrimination: An overview. In S. Plous (Ed.), *Understanding prejudice and discrimination* (pp. 3-48). New York: McGraw-Hill.
- Pomeroy, W. B. (1969). Transsexualism and sexuality: Sexual behavior of re- and postoperative male transsexuals. In R. Green & J. Money (Eds.), *Transsexualism and sex reassignment*. Baltimore: The Johns Hopkins Press.
- Preacher, K. J., & MacCallum, R. C. (2003). Repairing Tom Swift's electric factor analysis machine. *Understanding Statistics*, 2(1), 13-43.
- Price, J. H. (1982). High school students attitudes toward homosexuality. *Journal of School Health*, 52, 469-474.
- Reuters. (2007, January 13). Italian gays protest Pope's stance on marriage. *The New York Times*.
- Ricketts, W. A., & Hudson, W. W. (1990). Index of attitudes toward homosexuals. In C. M. Davis, W. L. Yarber, R. Bauserman, G. Schreer & S. L. Davis (Eds.), *Handbook of sexuality-related measures*. Thousand Oaks, CA: Sage.
- Robinson, B., & Shaver, P. (1973). *Measures of social psychological attitudes*. Ann Arbor: MI: ISR.

- Rokeach, M. (1968). *Beliefs, attitudes, and values*. San Francisco: Jossey-Bass.
- Roscoe, W. (2000). *Changing ones: third and fourth genders in native North America*. New York: St. Martin's Press.
- Rosenberg, M. (2002). Children with gender identity issues and their parents in individual and group treatment. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*(5), 619-621.
- Russo, R. M. (Ed.). (1983). *Sexual development and disorders in childhood and adolescence*. New Hyde Park, NY: Medical Examination Publishing Co.
- Sherif, M., & Cantril, H. (1945). The psychology of 'attitudes' part I. *The Psychological Review, 52*(6), 295-319.
- Sherwood, J. J. (1965). Self-identity and referent others. *Sociometry, 28*(1), 66-81.
- Slijper, F. M. E., Drop, S. L. S., Molenaar, J. C., & Schotmeijer, R. J. (1994). Neonates with abnormal genital development assigned the female sex: Parent counseling. *Journal of Sex Education and Therapy, 20*(1), 9-17.
- Smith, P. C., & Kendall, L. M. (1963). Retranslation of expectations: An approach to the construction of unambiguous anchors for rating scales. *Journal of Applied Psychology, 47*(2), 149-155.
- Smith, Y., Cohen, L., & Cohen-Kettenis, P. (2002). Postoperative psychological functioning of adolescent transsexuals: A Rorschach study. *Archives of Sexual Behavior, 31*(3), 255-261.
- Smith, Y., van Goozen, S., & Cohen-Kettenis, P. (2001). Adolescents with gender identity disorder who were accepted or rejected for sex reassignment surgery: A

- prospective follow-up study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(4), 472-481.
- Spence, J. T., Helmreich, R. L., & Stapp, J. (1974). A short version of the attitudes toward women scale (AWS). *Bulletin of the Psychonomic Society*, 2, 219-220.
- Spitzer, R. L., & Endicott, J. (1978). Medical and mental disorder: proposed definition and criteria. In R. L. Spitzer & D. F. Klein (Eds.), *Critical issues in psychiatric diagnosis* (pp. 15-39). New York: Raven Press.
- Stoller, R. (1985). *Presentations of gender*. London: Yale University Press.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5 ed.). New York: Pearson Education.
- The Hospital for Sick Children. (2005). Sick kids child physiology. Retrieved May 16, 2006, from <http://www.sickkids.ca/childphysiology/cpwp/Genital/genitalintro.htm>
- Thomas, W. I., & Znaniecki, F. (1918). *The Polish peasant in Europe and America*. Boston: Badger.
- Thorndike, R. M. (1997). *Measurement and evaluation in psychology and education* (6th ed.). Upper Saddle, New Jersey: Prentice-Hall.
- Van de Ven, P., Bornholt, I., & Bailey, M. (1996). Measuring cognitive, affective, and behavioral components of homophobic reaction. *Archives of Sexual Behavior*, 25(2), 155-179.
- vos Savant, M. (1996, August 4). Ask Marilyn. *Parade Magazine*, August 4, 6.
- Wagner, G. J. (1994). Internalized homophobia scale. In C. M. Davis, W. L. Yarber, R. Bauserman, G. Schreer & S. L. Davis (Eds.), *Handbook of sexuality-related measures* (pp. 371-372). Thousand Oaks, CA: Sage.

- Walinder, J. (1969). Transsexuals: Physical characteristics, parental age, and birth order. In R. Green & J. Money (Eds.), *Transsexualism and sex reassignment*. Baltimore: The Johns Hopkins Press.
- Walmyr Publishing Company. (1997). *The Walmyr assessment scale scoring manual*. Tallahassee, FL: Walmyr Publishing.
- Warren, H. C. (Ed.). (1934). *Dictionary of psychology*. Boston: Houghton--Mifflin
- Weinberg, G. (1972). *Society and the healthy homosexual*. New York: St. Martin's.
- Weschler, S. W. (1958). *The measurement and appraisal of adult intelligence* (4th ed.). Baltimore: Williams and Wilkens.
- Wilchins, R. (2004). *Queer theory, gender theory: an instant primer*. Los Angeles: Alyson Publications.
- Wilson, B. E., & Reiner, W. G. (1998). Management of intersex: a shifting paradigm. *The Journal of Clinical Ethics*, 9(4).
- Winterer, J., Cassorla, F., & Loriaux, L. (1986). Sexual ambiguity. *Medical Aspects of Human Sexuality*, 20, 54-69.
- Wright, L. W., Adams, H. E., & Bernat, J. (1999). Development and validation of the Homophobia Scale. *Journal of Psychopathology and Behavioral Assessment*, 21(4), 337-347.
- Yang, A. (1998). *From wrongs to rights: Public opinion on gay and lesbian Americans moves toward equality*. Washington, DC: National Gay and Lesbian Task Force Policy Institute.
- Zapackaite, I., & Barauskas, V. (2003). Congenital genital anomalies. Aspects of diagnostics and treatment. *Medicina*, 39(2), 105-113.

Zhou, J., Hofman, M. A., Gooren, L., & Swaab, D. F. (1995). A sex difference in the human brain and its relation to transsexuality. *Nature*, 378(6552), 68-70.

Zucker, K. J., & Spitzer, R. L. (2005). Was the gender identity disorder of childhood diagnosis introduced into DSM-III as a backdoor maneuver to replace homosexuality? A historical note. *Journal of Sex & Marital Therapy*, 31, 31-42.

Appendix A

Types and Approximated Frequencies of Intersexuality*

- Not XX and not XY one in 1,666 births
- Klinefelter (XXY) one in 1,000 births
- Androgen insensitivity syndrome one in 13,000 births
- Partial androgen insensitivity syndrome birth one in 130,000 births
- Classical congenital adrenal hyperplasia one in 13,000 births
- Late onset adrenal hyperplasia individuals one in 66 births
- Vaginal agenesis one in 6,000 births
- Ovotestes one in 83,000 births
- Idiopathic (no discernable medical cause) one in 110,000 births
- Iatrogenic (caused by medical treatment, for instance
progesterin administered to pregnant mother) no estimate
- 5 alpha reductase deficiency no estimate
- Mixed gonadal dysgenesis no estimate
- Complete gonadal dysgenesis births one in 150,000 births
- Hypospadias (urethral opening in perineum
or along penile shaft) one in 2,000 births
- Hypospadias (urethral opening between corona
and tip of glans penis) one in 770 births
- Total number of people whose bodies differ from
standard male or female one in 100 births
- Total number of people receiving surgery to

“normalize” genital appearance

one or two in 1,000 births

*source: <http://www.isna.org/faq/frequency>

Appendix B

DSM-IV Diagnostic Criteria for Gender Identity Disorder

- A. A strong and persistent cross-gender identification (not merely a desire for any perceived cultural advantages of being the other sex). In children, the disturbance is manifested by four (or more) of the following:
- (1) repeatedly stated desire to be, or insistence that he or she is, the other sex
 - (2) in boys, preference for cross-dressing or simulating female attire; in girls, insistence on wearing only stereotypical masculine clothing
 - (3) strong and persistent preferences for cross-sex roles in make-believe play or persistent fantasies of being the other sex
 - (4) intense desire to participate in the stereotypical games and pastimes of the other sex
 - (5) strong preference for playmates of the other sex
- B. Persistent discomfort with his or her sex or sense of inappropriateness in the gender role of that sex. In children, the disturbance is manifested by any of the following:
- In boys:
- assertion that his penis or testes are disgusting or will disappear or assertion that it would be better not to have a penis, or
 - aversion toward rough-and-tumble play and rejection of male stereotypical toys, games, and activities;
- In girls:
- rejection of urinating in a sitting position,
 - assertion that she has or will grow a penis, or

- assertion that she does not want to grow breasts or menstruate, or
- marked aversion toward normative feminine clothing.

C. The disturbance is not concurrent with a physical intersex condition.

D. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Appendix C

DSM-IV Definition of Mental Disorder

“In DSM-IV, each of the mental disorders is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. In addition, this syndrome or pattern must not be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavioral, psychological, or biological dysfunction in the individual. Neither deviant behavior (e.g., political, religious, or sexual) nor conflicts that are primarily between the individual and society are mental disorders unless the deviance or conflict is a symptom of a dysfunction in the individual, as described above” (DSM-IV, pp. xxi, xxii).

Appendix D

Attitudes Toward Transsexualism in a Swedish National Survey

From: Landén and Innala, 2000, pp. 379-380

- 1) Do you consider transsexualism to be a disease that can be treated?
- Yes No Have no opinion/Have not thought about it
- 2) Are you of the opinion that a transsexual person should have the opportunity to:
- a) Change name?
- b) Change identity?
- c) Be treated with the sex hormones of the opposite sex?
- d) Undergo surgical operation of the genitals?
- 3) Who should bear the expenses for a sex change?
- Public funds Private funds
- 4) Are you of the opinion that persons who have undergone a sex change should have the right to get married in their new sex?
- Yes No Have no opinion/Have not thought about it
- 5a) Are you of the opinion that persons who have undergone a sex change and are single should have the right to adopt and raise children on equal terms with other single people?
- Yes No Have no opinion/Have not thought about it
- 5b) Are you of the opinion that persons who have undergone a sex change and live together with a partner as a husband or wife should have the right to adopt and raise children on equal terms with other married people?
- Yes No Have no opinion/Have not thought about it
- 6a) Are you of the opinion that a person who have (sic) undergone a sex change from

female to male should be allowed to work with children, e.g., be a teacher or youth worker?

Yes No Have no opinion/Have not thought about it

6b) Are you of the opinion that a person who has undergone a sex change from male to female should be allowed to work with children, e.g., be a teacher, or youth worker?

Yes No Have no opinion/Have not thought about it

7) Would it be possible for you to have an openly transsexual person as a fellow worker?

Yes No Have no opinion/Have not thought about it

8) Would it be possible for you to have an openly transsexual person as a friend?

Yes No Have no opinion/Have not thought about it

9) Would it be possible for you to have an openly transsexual person as a partner?

Yes No Have no opinion/Have not thought about it

10) Are you of the opinion that society and the media pay too much attention to transsexualism?

Yes No Have no opinion/Have not thought about it

11) Do you know anyone who is transsexual?

Yes No Have no opinion/Have not thought about it

12) Do you think the incidence of transsexualism has increased in Sweden in the last 20 years?

Yes No Have no opinion/Have not thought about it

13) What do you think it is that makes a person transsexual? (Choose one alternative)

- You choose to be that way
- You learn to be that way

- You are born that way
- It is due to different experiences during childhood
- It is a disease that may affect you
- Other

Appendix E

The Genderism and Transphobia Scale

(1) Strongly Agree; (2) Agree; (3) Somewhat Agree; (4) Neutral; (5) Somewhat Disagree; (6) Disagree; (7) Strongly Disagree

- 1) I have beat up men who act like sissies
- 2) I have behaved violently toward a woman because she was too masculine
- 3) If I found out that my best friend was changing their sex, I would freak out
- 4) God made two sexes and two sexes only
- 5) If a friend wanted to have his penis removed in order to become a woman, I would openly support him
- 6) I have teased a man because of his feminine appearance or behavior
- 7) Men who cross-dress for sexual pleasure disgust me
- 8) Children should be encouraged to explore their masculinity and femininity
- 9) If I saw a man on the street that I thought was really a woman, I would ask him if he was a man or a woman
- 10) Men who act like women should be ashamed of themselves
- 11) Men who shave their legs are weird
- 12) I can not understand why a woman would act masculine
- 13) I have teased a woman because of her masculine appearance or behavior
- 14) Children should play with toys appropriate to their own sex
- 15) Women who see themselves as men are abnormal
- 16) I would avoid talking to a woman if I knew she had a surgically created penis and testicles

- 17) A man who dresses as a woman is a pervert
- 18) If I found out that my lover was the other sex, I would get violent
- 19) Feminine boys should be cured of their problem
- 20) I have behaved violently toward a man because he was too feminine
- 21) Passive men are weak
- 22) If a man wearing makeup and a dress, who also spoke in a high voice, approached my child I would use physical force to stop him
- 23) Individuals should be allowed to express their gender freely
- 24) Sex change operations are morally wrong
- 25) Feminine men make me feel uncomfortable
- 26) I would go to a bar that was frequented by females who use to be males
- 27) People are either men or women
- 28) My friends and I have often joked about men who dress like women
- 29) Masculine women make me feel uncomfortable
- 30) It is morally wrong for a woman to present herself as a man in public
- 31) It is all right to make fun of people who cross-dress
- 32) If I encountered a male who wore high-heeled shoes, stockings, and makeup, I would consider beating him up

NOTE: All items except questions 5, 8, 23, 26 are reverse scored.

Appendix F

First Draft of the ATAG-I

Attitudes Toward the Intersexed Scale

Please Read Carefully

Some people are born with bodies that are neither clearly male nor clearly female. Many terms are used to describe such people, including *intersexed*, *DSDs* (Disorders of Sex Development), and the older term *hermaphrodite*. Rather than having a body that is unquestionably male or female, an intersexed person is born with a body that is *ambiguous*. Sometimes, the genitals are ambiguous, so much so that doctors are unable to label a newborn infant as either a boy or a girl. Other times, the ambiguity is found inside the body. For example, women typically have ovaries for gonads and males have testicles. Some people, however, have one testicle and one ovary. It is also possible to have a gonad that is made up of both ovarian and testicular tissue, which is called an *ovotestis*. Ambiguity can also be found in the chromosomes that determine sex. Typically, men have an XY chromosome structure, while women have an XX structure. However, a wide variety of chromosome structures are possible, like XXY, XXYY, XXXYY, etc.

When an infant is born with ambiguous sex, a team of physicians and professionals usually assign a sex to the baby and follow with surgeries and/or other medical interventions to try to make the child look like a typical boy or girl. Current estimates are that as many as 2 out of 100 babies are born intersexed.

The following items describe actual types of intersexed conditions. There are no right or wrong answers to this survey. Please check the number that best represents your

response to each item as follows:

(1) Strongly Disagree; (2) Disagree; (3) Somewhat Disagree; (4) Neither Disagree nor Agree; (5) Somewhat Agree; (6) Agree; (7) Strongly Agree

- 1) I could not be a friend to someone whom I knew had ambiguous genitals.
- 2) I would feel uncomfortable around a woman whom I knew had testicles in her abdomen.
- 3) A young boy who is not able to urinate from a standing position should have surgery on his penis to allow him to stand, even if it means he will have little sexual feeling as an adult.
- 4) Parents would have trouble bonding with a son whose genitals did not look like a penis.
- 5) If I found out that a woman friend had male chromosomes (XY) and testicles in her abdomen, I would stop being friends with her.
- 6) I would have trouble letting my daughter spend the night with a girlfriend whose genitals looked more like a penis than a clitoris.
- 7) A newborn boy with a penis so small he would never be able to urinate standing should undergo a sex change operation and be raised as a girl.
- 8) I would feel uncomfortable around a man who I knew had been born with ambiguous genitals, was raised as a girl until puberty, and then switched to living as a boy.
- 9) I would be uncomfortable around a man who had an extra female chromosome (XXY) and protruding breasts.
- 10) I would be uncomfortable around someone who had both an ovary and a testicle.

- 11) A woman with male chromosomes (XY) should not be allowed to work closely with groups of young girls.
- 12) Parents would have trouble bonding with an infant daughter who had a large, penis-shaped clitoris.
- 13) I would have no problem with my brother marrying a woman who had male chromosomes (XY).
- 14) I would be upset if I were dating someone of the opposite sex and found out that person had the same chromosome structure as me.
- 15) It would be fine with me if my brother married a woman who had an elongated clitoris that looked like a penis.
- 16) It would not bother me if I found out that a male friend was born without a penis.
- 17) I would be comfortable working closely with someone who had both an ovary and a testicle.
- 18) I would be upset if I found out a person I was sexually attracted to had ambiguous genitals.
- 19) Parents would have trouble bonding with an infant son who had an abnormally small penis.
- 20) I would be uncomfortable if a person who had ambiguous genitals made a sexual advance toward me.
- 21) A newborn child with ambiguous genitals that cannot clearly be classified as either male or female should undergo surgery to make the genitals appear normal even if the surgery results in genitals that have little or no sexual feeling.
- 22) A man with ambiguous genitalia should not be allowed to coach a boy's team sport.

- 23) A girl who does not have a vagina would ultimately have trouble identifying as a female.
- 24) If I found out my best male friend did not have a penis and spent the first 10 years of his life living as a girl, I would not be friends with him.
- 25) I would feel uncomfortable if I knew the woman sitting next to me had an elongated clitoris that looked like a penis.

Attitude Toward the Transgendered Scale

Please Read Carefully

In the majority of instances, people who perceive themselves as male are born with male genitalia and those who perceive themselves as female are born with female genitalia. The exceptions are transgendered persons, who either permanently or periodically do not identify with the sex they were assigned at birth. Transgendered individuals physically appear to be one sex, but inwardly feel as if they are the other sex. Some transgendered persons are biological women who feel like they are really men (“I am a man trapped inside the body of a woman.”), while others are physically male who feel female (“I am a woman trapped inside the body of a man”). There are also those who do not identify as male or female (“I don’t feel like a woman or a man), while others identify as both (“Some days I feel like a man other days I feel like a woman.”). Sometimes (but not always) transgendered individuals choose to undergo sex reassignment surgeries, which are sometimes called *sex change* operations.

The following items describe actual types of transgendered conditions. There are no right or wrong answers to this survey. Please check the number that best represents your response to each item as follows:

(1) Strongly Disagree; (2) Disagree; (3) Somewhat Disagree; (4) Neither Disagree nor Agree; (5) Somewhat Agree; (6) Agree; (7) Strongly Agree

- 1) A man who dresses in women's clothes is sick.
- 2) I do not like to be around masculine women.
- 3) Anyone who wants to get a sex change operation is mentally disturbed.
- 4) I would feel really troubled if I found out a friend of mine was going to have a sex change operation.
- 5) I could not be friends with a woman who claimed she was really a man trapped inside the body of a woman.
- 6) I would be upset if my sister told me she was dating someone who had previously undergone a sex change operation.
- 7) I would not want to work with a woman who said she felt like a man.
- 8) I would not want my young son to be alone with a woman who used to be a man.
- 9) I would not let my 12-year old daughter spend the night with a 12-year old biological male friend who dressed, acted, and identified as a girl.
- 10) Watching a drag show would make feel me uncomfortable.
- 11) I would be profoundly disturbed if I found out my best male friend told me that he really felt like a woman.
- 12) A young boy who says he wants to be a girl is probably mentally disturbed.
- 13) A man who is beaten up for walking down the street while dressed as a woman would have gotten what he deserved.
- 14) I would not have a problem with a man who said he felt like a woman.

- 15) I would not want my daughter to be left alone with a woman who had undergone a sex change operation and was currently living as a man.
- 16) I could be friends with a person who performed in drag show.
- 17) A man should feel like a man and a woman should feel like a woman. Anything else is unnatural.
- 18) Some people experience gender as fluid: some days they like a man and some days they feel like a woman. I think these people are most likely mentally disturbed.
- 19) An elementary female teacher who is planning on having a sex change operation should be fired.
- 20) When I cannot tell if a person is a man or a woman, I usually assume that person is weird.
- 21) It would upset me to share a public restroom with someone whose sex was not readily apparent.
- 22) Men who feel like women and women who feel like men should not be allowed to work closely with children.
- 23) I think women who look masculine and make no attempt to look feminine are strange.
- 24) I believe sex change operations are morally wrong.
- 25) A young girl who claims she wants to be a boy should be taken to a specialist to be cured of her desires to be male.

Appendix G

Demographics

Form 1*

- 1) There are two forms of this survey. In order to help us correctly interpret the data, please look at the title above. If it says, "Form 1," answer this item with an "a". If it says, "Form 2," answer with a "b".
 - a) Form 1
 - b) Form 2
- 2) Sex
 - a) Male
 - b) Female
 - c) Intersexed
 - d) Transgender
- 3) Age:
 - a) 18-25
 - b) 26-30
 - c) 31-35
 - d) 36-40
 - e) over 40
- 4) Are you currently a college student?
 - a) No
 - b) Yes, undergraduate
 - c) Yes, graduate

- 5) If not currently a college student, how much education have you completed?
- a) Less than High School
 - b) High School Graduate
 - c) Some College
 - d) Completed an undergraduate degree
 - e) Completed a graduate degree
- 6) Marital Relationship
- a) Married
 - b) Widowed
 - c) Never Married
 - d) Divorced/Separated
 - e) Cohabiting
- 7) Which of the following best describes you:
- a) Exclusively/Primarily Heterosexual
 - b) Exclusively/Primarily Homosexual
 - c) Bisexual
 - d) Asexual
 - e) Other
- 8) During the past year, how often did you attend a religious service?
- a) Never
 - b) Once, few times
 - c) 1-3 times per month
 - d) Weekly or more

- 9) Which of the following best describes your religious identity:
- a) Atheist/Agnostic
 - b) Liberal
 - c) Conservative
 - d) Fundamentalist
- 10) Are you registered to vote?
- a) No
 - b) Yes
- 11) What political party do you most identify with?
- a) Republican
 - b) Democrat
 - c) Independent
 - d) Libertarian
- 12) Which of the following best describes your political ideology?
- a) Strongly Conservative
 - b) Conservative
 - c) Moderate
 - d) Liberal
 - e) Strongly Liberal
- 13) Which of the following best describes your beliefs concerning transgenderism:
- a) It is a choice
 - b) Transgendered people are born that way
- 14) Do you personally know a person who is transgendered?

a) Yes

b) No

15) Do you personally know a person who is intersexed?

a) Yes

b) No

*Note: Approximately half of the forms read, "Form 2"

Appendix H

The Revised and Final Version ATAG-I

Attitudes Toward the Intersexed Scale

Please Read Carefully

Some people are born with bodies that are neither clearly male nor clearly female. Many terms are used to describe such people, including *intersexed*, *DSDs* (Disorders of Sex Development), and the older term *hermaphrodite*. Rather than having a body that is unquestionably male or female, an intersexed person is born with a body that is *ambiguous*. Sometimes, the genitals are ambiguous, so much so that doctors are unable to label a newborn infant as either a boy or a girl. Other times, the ambiguity is found inside the body. For example, women typically have ovaries for gonads and males have testicles. Some people, however, have one testicle and one ovary. It is also possible to have a gonad that is made up of both ovarian and testicular tissue, which is called an *ovotestis*. Ambiguity can also be found in the chromosomes that determine sex. Typically, men have an XY chromosome structure, while women have an XX structure. However, a wide variety of chromosome structures are possible, like XXY, XXYY, XXXYY, etc. It is usually not possible to identify people who have intersexed conditions unless you can see their genitals or know something about their gonads or chromosomes.

When an infant is born with ambiguous sex, a team of physicians and professionals usually assign a sex to the baby and follow with surgeries and/or other medical interventions to try to make the child look like a typical boy or girl.

The following items describe actual types of intersexed conditions. There are no right or wrong answers to this survey. Please fill in the corresponding number on the

accompanying scanning sheet that best represents your response to each item as follows:

(1) Strongly Agree; (2) Agree; (3) Neither Agree nor Disagree; (4) Disagree; (5)

Strongly Disagree

- 1) I could not be a friend to someone whom I knew had ambiguous genitals.
- 2) I would feel uncomfortable around a woman whom I knew had testicles in her abdomen.
- 3) A male infant born with a penis that will never allow him to urinate standing should have surgery on his penis to let him stand even if it may result in little or no sexual feeling as an adult.
- 4) It would be fine with me if my brother married a woman who had an elongated clitoris that looked like a penis.
- 5) I would have trouble bonding with a son whose genitals did not look like a penis.
- 6) It would not bother me if I found out that a male friend was born with ambiguous genitals and did not currently have a penis.
- 7) If I found out that a woman friend had male chromosomes (XY) and testicles in her abdomen, I would stop being friends with her.
- 8) I would have trouble letting my daughter spend the night with a girlfriend whose genitals looked more like a penis than a clitoris.
- 9) A newborn boy with a penis so small he would never be able to urinate standing should undergo a sex change operation and be raised as a girl.
- 10) I would feel uncomfortable around a man who had an ovary.
- 11) I would feel uncomfortable around a man who I knew had been born with ambiguous genitals and was raised as a girl until puberty, and then switched to living as a boy.

- 12) I would be uncomfortable around a man who had an extra female chromosome (XXY) and protruding breasts.
- 13) I would be uncomfortable around someone who had both an ovary and a testicle.
- 14) A woman with male chromosomes (XY) should not be allowed to work closely with groups of young girls.
- 15) I would have trouble bonding with an infant daughter who had a large, penis-shaped clitoris.
- 16) I would have no problem with my brother marrying a person who was identified as female at birth, and who had male chromosomes (XY).
- 17) I would be upset if I were dating someone of the opposite sex and found out that person had the same chromosome structure as me.
- 18) I would be upset if I found out a person I was sexually attracted to had ambiguous genitals.
- 19) It would not bother me if I found out that a male friend was born with ambiguous genitals and did not currently have a penis.
- 20) I would have trouble bonding with an infant son who had an abnormally small penis.
- 21) I would be uncomfortable if a person who had ambiguous genitals made a sexual advance toward me.
- 22) A newborn child with ambiguous genitals that cannot clearly be classified as either male or female should undergo surgery to make the genitals appear normal even if the surgery results in genitals that have little or no sexual feeling.
- 23) A man with ambiguous genitalia should not be allowed to coach a boy's team sport.
- 24) If I found out my best male friend was born with ambiguous genitals and spent the

first 10 years of his life living as a girl, I would still be friends with him.

25) I would feel uncomfortable if I knew the woman sitting next to me had an elongated clitoris that looked like a penis.

Note: Items 4, 6, 16, 19, and 24 are reverse coded

Attitudes Toward the Transgendered Scale

Please Read Carefully

In the majority of instances, people who perceive themselves as male are born with male genitalia and those who perceive themselves as female are born with female genitalia. The exceptions are transgendered persons, who either permanently or periodically do not identify with the sex they were assigned at birth. Transgendered individuals physically appear to be one sex, but inwardly feel as if they are the other sex. Some transgendered persons are biological women who feel like they are really men (“I am a man trapped inside the body of a woman”), while others are physically male who feel female (“I am a woman trapped inside the body of a man”). There are also those who do not identify as male or female (“I don’t feel like a woman or a man), while others identify as both (“Some days I feel like a man other days I feel like a woman”). Sometimes (but not always) transgendered individuals choose to undergo sex reassignment surgeries, which are sometimes called *sex change* operations.

The following items describe actual types of transgendered conditions. There are no right or wrong answers to this survey. Please fill in the corresponding number on the accompanying scanning sheet that best represents your response to each item as follows:

(1) Strongly Agree; (2) Agree; (3) Neither Agree nor Disagree; (4) Disagree; (5) Strongly Disagree

- 1) A man who dresses in women's clothes is sick.
- 2) I do not like to be around masculine-looking women.
- 3) Anyone who wants to get a sex change operation is mentally disturbed.
- 4) It would not bother me if I found out a friend of mine was going to have a sex change operation.
- 5) I could not be friends with a woman who claimed she was really a man trapped inside the body of a woman.
- 6) I would be upset if my sister told me she was dating someone who had previously undergone a sex change operation.
- 7) I would have no problem working with a woman who said she felt like a man.
- 8) I would not want my young son to be alone with a woman who used to be a man.
- 9) I would not let my 12-year old daughter spend the night with a 12-year old biological male friend who dressed, acted, and identified as a girl.
- 10) Watching a drag show would make me feel uncomfortable.
- 11) I would be profoundly disturbed if I found out my best male friend told me that he really felt like a woman.
- 12) A young boy who says he wants to be a girl is probably mentally disturbed.
- 13) A man who is beaten up for walking down the street while dressed as a woman would have gotten what he deserved.
- 14) I would not have a problem with a man who said he felt like a woman.
- 15) I would not want my young daughter to be left alone with a woman who had

- undergone a sex change operation and was currently living as a man.
- 16) I could be friends with a person who performed in a drag show.
- 17) A man should feel like a man and a woman should feel like a woman. Anything else is unnatural.
- 18) Some people experience gender as fluid, some days feeling like a man and some days feeling like a woman. I think these people are most likely mentally disturbed.
- 19) An elementary female teacher who is planning on having a sex change operation should be fired.
- 20) When I cannot tell if a person is a man or a woman, I usually assume that person is weird.
- 21) I would not mind sharing a public restroom with a person who claimed to feel like the other sex.
- 22) Men who feel like women and women who feel like men should not be allowed to work closely with children.
- 23) I think women who look masculine and make no attempt to look feminine are strange.
- 24) I believe sex change operations are morally wrong.
- 25) A young girl who claims she wants to be a boy should be taken to a specialist to be cured of her desires to be male.

Note: Items 4, 7, 14, 16, and 21 are reverse coded

Curriculum Vitae

KAND S MCQUEEN, M.S.

2415 N. Mt. Gilead Rd
Bloomington, IN 47408
(812) 336-6662
ksmcquee@indiana.edu

EDUCATION

2007 Indiana University, Doctoral Candidate in Educational Psychology
2006 Indiana University, Master of Science in Educational Psychology (M.S)
1984 Indiana State University, Bachelor of Science in Industrial Arts Education (B.S)
1982 Indiana State University, Bachelor of Science in Manufacturing Technology, 1982.

TEACHING EXPERIENCE

December 2003-May 2008

Indiana University, Bloomington, Indiana

Guest Lecturer: Presentation on “Gender Identity and the Inadequacies of the Two-Sex/Two-Gender Paradigm.” Invited to give this presentation multiple times in graduate and undergraduate course in the School of Education and throughout campus.

December 2003-May 2008

Indiana University School of Education, Bloomington, Indiana

Instructor of Record for Y502/Y500, “Intermediate Statistics Applied to Education,” 4 credit hours total; Y501, “Statistical Methods Applied to Education,” 3 credit hours total; Y420, “Approaches and Issues in Educational Research,” 5 credit hours total; P516, “Adolescent Development,” 6 credit hours total; P313, “Adolescents in a Learning Community,” 6 credit hours total; P254/M20, “Educational Psychology/All Grades,” 4 credit hours total. Associate Instructor for the lab portion of the following courses: Y502, “Intermediate Statistics Applied to Education,” 2 credit hours total; Y604, “Multivariate Analysis in Educational Research,” 2 credit hours total.

RESEARCH EXPERIENCE

September 2006-Present

Dissertation: *Development of the Attitudes Toward the Atypically Gendered Inventory (ATAG-I).*

Development of psychometrically sound, reliable, and valid assessment of societal attitudes toward the atypically gendered, which includes two scales: The Attitude Toward the Transgendered Scale (ATT-S) and the Attitude Toward the Intersexed Scale (ATI-S).

Director: Carol Hostetter, Ph.D.

Chair: Phil Carspecken, Ph.D

PUBLICATIONS

McQueen, K. S. (2006). Breaking the gender dichotomy: The case for transgender education in school curriculum. *Teachers College Record*, Date Published: August 14, 2006, <http://www.tcrecord.org> ID Number: 12663.

Rinn, A. N., McQueen, K. S., Clark, G., Rumsey, J. L. (in press). Gender differences in gifted adolescents' math/verbal self-concepts and math/verbal achievement: Implications for the STEM fields. *Journal for the Education of the Gifted*. [Invited submission]

Manuscripts under Review

Jamieson, K. M., Gross, C. M., McQueen, K. S., Rinn, A. N. (2007). *A canonical correlation analysis of the influence of social comparison, gender, and grade level on multidimensional self-concepts of gifted adolescents*. Manuscript submitted for publication.

McQueen, K. S., Estell, D. B., Hostetter, C. (2007). *An empirical deconstruction of the two-sex/two-gender paradigm*. Manuscript submitted for publication.

McQueen, K. S., Hostetter, C. (2007). *An introduction to intersexuality: Dealing with students who fall outside the binary*. Manuscript submitted for publication.

Rinn, A. N., Mendaglio, S., Rudasill, K., & McQueen, K. (2008). *Examining the relationship between overexcitabilities and self-concepts of gifted adolescents via multivariate cluster analysis*. Manuscript submitted for publication.

Manuscripts in Progress

Meyer, L. D., Anderson, J. A., McQueen, K. S. *Examining culturally competent practices for youth with emotional-behavioral challenges*.

Rinn, A. N., McQueen, K. S., Smith, K., & Wallace, R. *Overexcitabilities, self-concept, and college students: An analysis of students of varying ability levels*.

Rinn, A. N., & McQueen, K. S. *A longitudinal examination of adolescents' participation in a summer program for the gifted*.

TECHNICAL REPORTS

Plucker, J. A., Spradlin, T. E., Zaph, J. S., McQueen, K. S., Chien, R. C. (2005). *Middle school curriculum project*. Prepared for the Indiana Department of Education.

PROFESSIONAL PRESENTATIONS

McQueen, K. S. (2007, June/July). *An empirical deconstruction of the two-sex/two gender paradigm*. Poster accepted at the meeting of The National Women's

Studies Association (NWSA), Pheasant Run, Illinois.

McQueen, K. S (2007, April). *Breaking the gender dichotomy: The case for transgender and intersex education in school curriculum*. Paper presented at the meeting of the American Educational Research Association (AERA), Chicago, Illinois.

McQueen, K. S (2005, April). *Transgenderism 101: The inadequacies of the two-gender paradigm*. Presentation at the meeting of the Come Together Kentucky Lesbian, Gay, Bisexual, Transgendered Conference, Bowling Green, Kentucky. *Awarded Best Presentation in Block*.

McQueen, K. S (2005, March). *The inadequacies of the two-gender paradigm*. Presentation at the meeting of the Translating Identity Conference, Burlington, Vermont.

McQueen, K. S (2003, April). *A case study of the effects of androgen insensitivity syndrome on adult development: The effects of medical management and family and peer support on gender identity and emotional adjustment*. Poster session presented at the meeting of the Society for Research in Adult Development, Tampa, Florida.

OTHER PRESENTATIONS

McQueen, K. S (2008, April; scheduled to present). *Gender identity issues in children and adolescents: Medical and ethical concerns on the transgender issue for young persons and parents*. National Association of Social Workers. *By invitation*.

McQueen, K. S (2007, September). *Transgender issues in the workplace*. Residential Programs and Services Diversity Workshop: Examining Issues Affecting Our Workplace. Indiana University, Bloomington, Indiana. *By invitation*.

McQueen, K. S (2006, July). *Sexual differentiation and the falsification of the two-sex/two-gender assumption*. University of West Georgia, Carrollton, Georgia. *By invitation*.

McQueen, K. S (2005, March). *Gender identity and the falsification of the gender dichotomy*. Indiana University/Purdue University at Indianapolis. *By invitation*.

McQueen, K. S (2002-present). *Gender identity and the inadequacies of the gender binary*. Indiana University, Bloomington, Indiana. *Have given this presentation over 30 times to classes and groups throughout the IU campus*.

AWARDS

2007-2008 The Richard C. Pugh Research Methodology Fellowship.

SERVICE ACTIVITIES

Facilitator of *GenderTalk*, 2002. A support group for students wishing to discuss issues of gender identity, Indiana University GLBT office.

Diversity panel member, 2001-2002. Served on several panels for classes throughout the IU campus on panels discussing transgenderism; Indiana University's Gay, Lesbian, Bisexual, Transgender Student Support Service.

REFERENCES

Phil F. Carspecken, Ph.D., Professor, Indiana University; 812-856-8356;
pcarspec@indiana.edu

Ginette Delandshere, Ph.D., Professor, Indiana University; 812-856-8347;
gdelands@indiana.edu

David B. Estell, Ph.D., Assistant Professor, Indiana University; 812-856-8308;
destell@indiana.edu

Carol Hostetter, Ph.D., Associate Professor, Indiana University/Purdue University at Indianapolis (IUPUI); 812-855-4427; chostett@indiana.edu

Gary M. Ingersoll, Ph.D., Professor Emeritus, Indiana University; ingersol@indiana.edu

Cathy King Pike, Ph.D., Professor, IUPUI; 317-278-0388; ckpike@iupui.edu

Anne Rinn, Ph.D., Assistant Professor, University of Houston-Downtown; 713-221-8014; RinnA@uhd.edu