

beliefs depicting gender as binary and do not necessarily reflect an underlying natural or scientific sex binary. The use of binary categories to 'prove' that two sexes equals two genders is both a cultural construct and also a circular argument.⁴⁴

Technologies of Sex and Gender Formation

Competing debates and ideas about sexual differentiation emerge in the earliest biomedical texts, persist through the Middle Ages, and continue up to contemporary times. From their earliest iterations, philosophical and medical texts in the West offered explanations for a diversity of sexes/genders. The two dominant philosophical traditions, Galenic/Hippocratic and Aristotelian, produced conflicting ideas about the body and these manifested in fundamentally different ideas about male and female bodies and selves. For example, Hippocrates' *On Regimen*, one of the earliest medical texts (dating back to the fifth century B.C.E.), explained six sex/gender possibilities based on outward bearing: manly men, manly women, feminine men, feminine women, hermaphrodite men and hermaphrodite women.⁴⁵ In the fourth century B.C.E., however, Aristotle contravened Hippocrates' definition by asserting that women were differentiated from men (in status and physiology) because of the coolness of their humors.⁴⁶ These different sex and gender paradigms demonstrate how the ontology within which sex and gender were understood shaped how people made sense of sex and gender diversity. In the Roman period (129–200 C.E.) Galen argued that women's and men's bodies were the same, save for women's genitals, which were "turned inside out." Scholars built on Galen's theories through the fifteenth century. In contrast, Patrick Geddes, an eighteenth-century professor of biology, asserted that very cells in women's and men's bodies were different, claiming that men's cells gave off energy while women's cells stored it.⁴⁷ These different paradigms for sex led to radically different 'truths' and technologies of gendered bodies.⁴⁸

Different historical eras have had different dominant ontologies and attendant gender paradigms that responded to and in turn affected the social structures and hierarchies of the day, and technologies were key

participants in this process. In 1796 Samuel Thomas von Soemmerring claimed to be the first anatomist to document a female skeleton (see Figure 1.1). While Soemmerring likely exaggerated his case, it is true that drawings of female bodies were not included in anatomy texts until

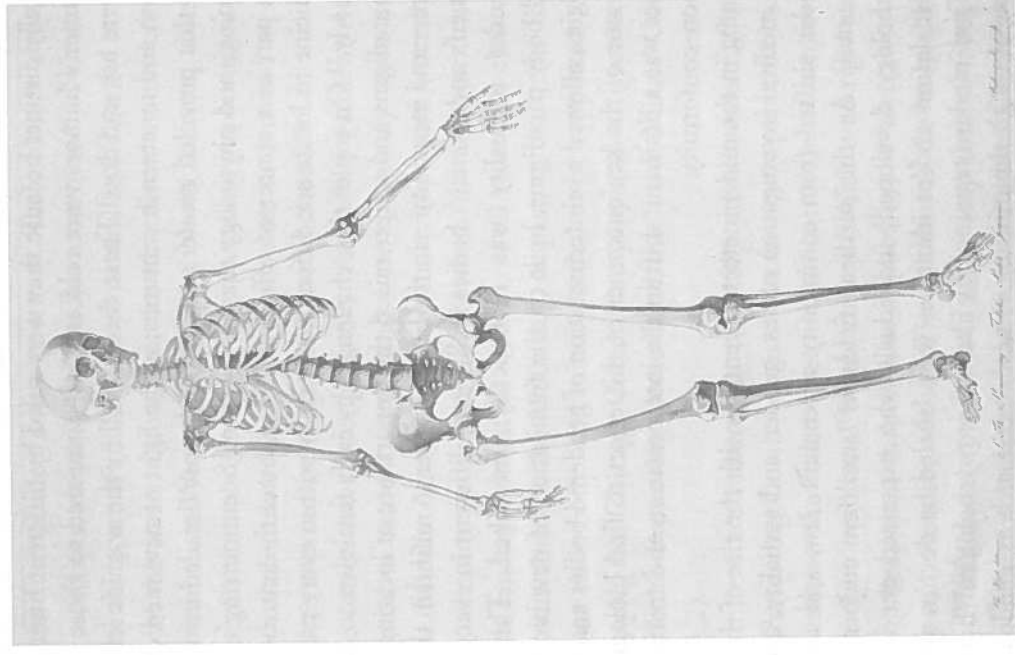


Figure 1.1 Drawing of a female skeleton from *Tabula Sceleti Feminine* by Samuel Thomas von Soemmerring.⁴⁹ Reproduction made from an original at the Boston Medical Library in the Francis A. Countway Library of Medicine.

the 1730s.⁵⁰ This suggests either that differences between male and female bodies were seen as insignificant, or that women's bodies were not considered an intellectually important subject, while men's bodies were.

There was a variety of competing theories of sex difference prior to this scientific focus, for instance the idea that women were physically and morally distinct because they were ruled by different humors than men; women's humors were cold and wet compared to those of men, which were hot and dry.⁵¹ These theories fell by the wayside in the late eighteenth and nineteenth centuries, in the light of new medical technologies that provided greater access to and more detailed information about biology and physiology than ever before. Soemmering's illustration was part of a concerted effort within eighteenth-century science and medicine to locate sex differences literally within every part of the human body.⁵² On top of this, challenges by early feminists to reigning gender paradigms and scripts raised the importance of locating gender difference—and inequality—in the body in order to maintain the status quo. If men's and women's bodies really were different in every aspect, then gender inequality was biologically proscribed. These new gendered body paradigms, built on the foundation of new biomedical technologies, allowed a reinterpretation of gendered bodies and identities, and one of the key outcomes of this effort to find biological sex differences was a dramatic shift in the interpretation and treatment of gender non-conformity.

Beginning in the mid-nineteenth century with the rise of the scientific and medical investigation of sex, gender, and sexuality, authority over gender shifted from community agreement, law, and the state to medicine.⁵³ As the medical fields of sexology, endocrinology, and psychology developed, individuals who expressed gender non-conformist desires and/or identities were labeled by doctors with the revival of pre-modern terminology like real or psychological 'hermaphrodite,' and through the minting of new terms, such as 'gender invert' and 'eunist.'⁵⁴ These new technologies did more than name people; they defined appropriate ways to manifest, identify, and treat gender non-conformity. Gender non-conforming individuals whom medical practi-


tioners had previously left to their own devices were suddenly subject to medical diagnosis and treatment.

Technologies of Gender Conformity

The late nineteenth century marked the inception of medical authority over sex, gender, and sexuality, and these medical technologies shaped more than just gender non-conformity. Technologies shape gender paradigms, scripts, identities, and bodies more broadly. Normative body scripts, however, are often invisible or naturalized. Take for example, the ubiquity of the corset: throughout the nineteenth century corsets were worn by women in Western Europe and North America. Corsetry was more than fashionable dress, however; prevailing gender ideology of the day demanded corsetry because corsets were understood to construct and enforce appropriate, hegemonic, womanhood.⁵⁵

While corsets have a long history (corset-like garments have been documented in ancient Egypt and were commonly worn in Europe since the Middle Ages), they were most important (socially and in terms of shaping gender scripts) between the nineteenth and early twentieth century. Almost all women, of all races and class divisions, wore corsets through the 1800s due, in part, to the belief that as the weaker sex their body (and mind) needed to be supported. Consider, for example, the Chicago Corset Company's advertisements for the "Ball's Health Preserving Corset" and the "H. P. Misses' Corset" (see Figure 1.2).

Two corsets are featured in this 1881 advertisement. One, "Ball's Health Preserving Corset," asserts that its newly patented technological innovation—the coiled wires—made corsets more comfortable and healthier than 'traditional' boned corsets (which used rigid stays made of bone to keep their shape). Also implied in the advertisement is the necessity of corsets for women. The solution to the 'unhealthy' consequences of traditional corsetry was not to stop their use, but rather to develop new technologies to make corsets healthier. Creating the hourglass, 'feminine shape'—what we can think of as the normatively gendered body of that era—was considered more important than the medical problems corsets often caused. That is, gender ideologies that

BALL'S

CORSETS

Patented February 27, 1881.

BACK VIEW.

H. P. MISSES' CORSET.

Every mother will recognize and appreciate the value of this corset over all others for her daughter. If she does not, that of our other corsets for sale. It fits closely and perfectly, and in the chest and back, perfect freedom of movement, room for growth and full respiration. It is the *ne plus ultra* of corsets.

Made from satinet, jean, white and drab. Sizes, eighteen to twenty-six. Price, by mail, postage prepaid, 75 cts.

PRICE \$1.00 TO \$2.00 EACH.

Chicago Corset Company, 1881.

Figure 1.2 Advertisement booklet for Ball's Health Preserving Corsets and the H. P. Misses' Corset. Chicago Corset Company, 1881.

defined ideal women's bodies produced technologies that reshaped how individual women looked and identified. This dominant ideology and the associated scripts for normative womanhood are even more explicit in the second advertisement for a corset intended for girls. The "H. P. Misses' Corset" advertises that wearing the corset will shape young girls' bodies and *minds* appropriately. In fact, the corset's description begins by admonishing women: "Train your daughters to a healthy and symmetrical body and mind, and existence becomes a delight."⁵⁶ The implication here is that girls' and women's bodies need corseting to develop both physically and morally!

The corset was seen as a medical and moral necessity for women in the nineteenth century, and came to signify normative femininity.⁵⁷ Simultaneously, and perhaps more significantly, the ways that it shaped women's bodies and affected their movement through the world reinforced social beliefs about womanhood. For example, tight lacing

damaged women's organs and led to fainting and restricted movement, something seen as clear evidence of women's fragile natures. Corsets dominated women's fashion through the early 1900s until social and technological changes led to new gender norms that, among many other social alterations, displaced corsetry. Advances in the mass production of clothing and elastic as well as women's increased participation in the paid labor force and attendant need for less restrictive clothing meant that fabric bras and girdles became less expensive and more practical than corsets. Simultaneously, gendered clothing norms and scripts changed when flappers hit the scene after World War I.

The rise of the flapper aesthetic in the 1920s was more than a fashion trend. It was an intentional, pointed, and dramatic rejection of Victorian femininity and female domesticity. As young women cast off their corsets and long skirts, they turned toward a new modern womanhood characterized by independence, urbanism, and youthfulness. These new gender scripts were shockingly masculine compared to the accentuated curves and delicacy cultivated by corsets and late nineteenth-century feminine gender norms. As part of these new gender scripts women cut their hair into short bobs, and bound their breasts with cloth to create more youthful, boyish appearances.

All of this gender bending caused a social uproar and gender crisis. Gender scripts for women changed swiftly and dramatically and this shift was tied up with women's newly acquired right to vote (1918 in Canada and 1920 in the United States), and increasing presence in the public sphere.⁵⁸ New technologies including jazz music, mass produced cigarettes, suffrage, and short skirts radically transformed the available gender scripts for women. The body practices associated with flapper femininity—dancing to jazz music, drinking alcohol, smoking, voting, working, and embracing single womanhood—went against the Victorian gender scripts that had dominated society before World War I, and transformed who young women could be. Technological innovation in the early twentieth century, in concert with shifting gender paradigms, revolutionized normatively gendered bodies and identities. The meaning of gender non-conformity was also being renegotiated as part of and resultant to these paradigmatic shifts.

Technologies of Gender Non-Conformity

In every historical era, the technologies of the day have been used to delineate the boundaries between male and female, between men and women, and these technologies have shaped how individuals and societies at large make sense of sex, gender, and their diversity. Neither the complexities of people's lived experiences nor the ideologically driven theories of sex and gender are modern phenomena. Evidence that individuals have lived cross-gender or gender non-conforming lives can be found in almost all cultures, and there have been gender non-conforming pharaohs, kings, queens, Catholic Popes, soldiers, musicians, governors, criminals, and everyday people. It is difficult to talk about transgender individuals before the development of modern sexual and gender identities, in part because sexuality and gender have often been conflated.⁵⁹ We can, however, look to historical and cross-cultural examples of gender non-conformity as evidence that these practices, and their contemporary corollaries, are not new or unique. In addition to individuals who have lived cross-gender lives, in many times and places other possibilities were available. While Western societies have not often offered third (let alone fourth or fifth) gender options, many other societies have, and some still do. Some cultures not only accommodate these alternate genders but also see them as legitimate ways of being, powerful and important to the society at large.⁶⁰ We find these third genders embraced and even named in many cultures including in some Native American and Canadian tribes (Berdache), in Indian society (Hijras), in Albania (Sworn Virgins), and in Maori communities (Takatapu).

In the process of recording gender non-conformity, historical research has also documented the ways that the rigid binary categories of male/female and man/woman have been constructed, reinforced, and defied across time and place.⁶¹ How gender non-conformity has been defined and understood reflects the prevailing ontology, social scripts, and technologies of the time, making it difficult for contemporary scholars to know how to talk about and make sense of gender non-conformity from the past. In an effort to reveal histories of gender non-conformity, should we transcribe current identities onto historical

gender diversity?⁶² Or would that obscure the complexity and historical specificity of those experiences by ascribing ahistorical identities onto experiences from the past?⁶³ As historian Elizabeth Reis asks, "can we really compare Joan of Arc's cross-dressing and militarism in fifteenth-century France with Sarah Emma Edmonds, who lived as a man and fought in the American Civil War" without eliding the specificity of their historically situated experiences?⁶⁴ This dilemma is not unique; gay and lesbian scholars have struggled with the same issues when deciding how to make sense of historical sexual diversity in the absence of contemporary sexual identities.⁶⁵

Comprehension of past gender non-conformity is also complicated by the histories of colonialism. One of the reasons that gender non-conformity was documented in cultures around the world was because White Western explorers sought evidence to prove that their own cultures were more advanced than 'primitive' ones (recall the history of 'race science' discussed in the Preview). Almost everything that we know about gender non-conformity within Native American and Canadian tribes, for example, comes from the notes of White explorers as viewed through a lens that justified colonial racism. In fact the word used to describe individuals living cross-gender lives, 'Berdache,' is not a Native word, but one adopted by Europeans from a pejorative⁶⁶ applied by French missionaries and explorers. The naming of alternative gender schema in Native tribes, then, reflects the ideology and indigenous meaning-making. Documentation of non-Western histories of gender non-conformity reveals as much about Western norms and beliefs as it does about indigenous gender diversity; unfortunately, this can make it difficult to comprehend precisely the attitudes of those cultures toward gender non-conformity, or to compare them to contemporary views. As gender scholar Vic Muñoz argues, the pathology of Western gender and transgender paradigms have been mapped onto diverse indigenous gender and sexual identities.⁶⁷

While gender non-conformity throughout time cannot always be called transgenderism, individuals have used the technologies available in any given era to construct gendered bodies and identities in both

normative and non-normative ways. Contemporary gender status for both non-transgender and transgender individuals is judged primarily through visibility—whether one's body (inside and out) reflects one's chosen gender according to biomedical criteria and as judged by medical authorities. In contrast, before the rise of medical intervention into gender, the ability for an individual to choose how to do gender was more often rooted in social or legal agreement. This often meant that power-holders, legal authorities such as kings, governors, Congress, or judges, claimed a need to confirm an individual's chosen gender.

The colonial Virginia case of Thomasine/Thomas Hall illustrates the different body scripts and technologies at play in the 1600s; in 1629 Hall was called before the General Court in Virginia because his/her gender was unclear—s/he wore both women's and men's clothing. It was the *clothing* that was key here; as the primary gender code of the day, clothing inscribed gender. Ultimately the courts ruled that Hall's refusal to 'choose' a single gender had to be reflected in his/her clothing. It was not the truth of biology or even body that mattered, but rather social presentation *vis-à-vis* clothing. In other places and eras as well, taking on a gendered social role and appearance was sufficient to claim one's desired gender.⁶⁸ These cases demonstrate how the act of substantiating sex and gender has changed over time in concert with technological innovation and dominant gender paradigms.

In the early 1900s the dominant paradigms for sex and gender shifted away from the 1800s model of male and female bodies as dramatically different. Instead, male and female bodies were viewed as having the same core biology and physiology but shaped by different 'sex hormones' both in-utero and throughout one's lifespan. This led to psycho-medical redefinition of sexuality and gender. Early efforts conflated sexuality and gender, mixing all gender or sexual non-conformities under the umbrella term 'inverts,' and attributing the roots of sexual and gender variation to physiological and hormonal differences. Over time, sexologists and scientists came to differentiate between sex and gender, shifting toward an identity/mental model instead of a physiologically centered one, and these new technologies

opened up new scripts for gender non-conformity. This paradigm shift entitled people to treat gender non-conformity with hormonal and surgical intervention; if the structure of male and female bodies was essentially the same, then biomedical technologies could allow individuals to move from male to female or vice versa. The shifts in scientific gender paradigms opened up the possibility for gender change in the early 1900s, and it is then that we see the emergence of transsexuality, defined as the desire to transform one's body *through hormones and surgery*.⁶⁹

Along with these new biomedical technologies occurred an increase in the quantity and selection of information technologies, such as newspapers, magazines, radio, and eventually television, which disseminated information about sex-change research, transsexual individuals, and other forms of gender non-conformity. The new information about and language for gender non-conformity were in themselves new technologies of meaning-making, and exposure to them opened up new identity and body possibilities for individuals. As historian Joanne Meyerowitz suggests, "stories in the press allowed a few American readers to imagine surgical sex change and seek it for themselves."⁷⁰ Meyerowitz describes what was perhaps the most significant media coverage of transsexuality in North America, when in 1952 the *New York Daily News* broke the story that an 'Ex-GI' had just undergone a 'sex-change' to become the blonde, beautiful, Christine Jorgensen. Jorgensen's return to the United States in 1953 was covered in every major domestic news outlet, propelling her successful nightclub act for several years. "Jorgensen was more than a media sensation, a stage act, or a cult figure," Meyerowitz concludes. "Her story opened debate on the visibility and mutability of sex."⁷¹ In that historic moment, one person telling her story in the public realm catapulted transgender issues into everyday society. Jorgensen's story, and the repercussions of it being publicized, reinforce how new technologies, in this case information and biomedical technologies, participate in significant social and individual change. They are responsible for instigating paradigmatic changes as well as new social scripts, all of which allowed new body and identity possibilities for individuals.

The trend toward classification and treatment of gender non-conformity in North America continued through the 1950s, 1960s, 1970s, and 1980s. Medical and psychological diagnoses were introduced and used to classify, pathologize, and treat gender non-conformity. Harry Benjamin, building on the theories of Magnus Hirschfeld and other early sexologists, worked with transgender individuals in North America in the 1950s. Regarded as the father of modern transsexual 'treatment,' Benjamin wrote the groundbreaking book *The Transsexual Phenomenon* in 1965, thus opening the formal genre of transsexual medical literature. While there were a handful of articles that dealt with what would later be termed 'gender dysphoria'⁷² before his book was published, Benjamin's was the first comprehensive analysis and medical treatment guide for transsexual individuals.⁷³ The guidelines that Benjamin laid out in this and subsequent texts are still in use today through the World Professional Association for Transgender Health; formerly known as the Harry Benjamin International Gender Dysphoria Association, this international organization sets transgender treatment protocols.

As part of the medicalization of transsexuality, Gender Identity Disorder (GID) was introduced as a mental disorder and defined in the American Psychiatric Association's *Diagnostic and Statistical Manual* in 1980. Gender Identity Disorder is defined in the most recent edition of this set of guidelines for psychological diagnosis and treatment, (*DSM-IV*), in the following manner:

There are two components of Gender Identity Disorder, both of which must be present to make the diagnosis. 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 (Criterion A). This cross-gender identification must not merely be a desire for any perceived cultural advantages of being the other sex. There must also be evidence of persistent discomfort about one's assigned sex or a sense of inappropriateness in the gender role of that sex (Criterion B). The diagnosis is not made if the individual has a concurrent intersex condition (e.g. androgen

insensitivity syndrome, or congenital adrenal hyperplasia) (Criterion C). To make the diagnosis, there must be evidence of clinically significant distress or impairment in social, occupational, or other important areas of functioning (Criterion D).⁷⁴

One of the consequences of this process of medicalization has been the construction of a specific gender script to which transgender individuals need to adhere in order to access sex reassignment surgery (SRS). This new script reinforced existing hegemonic gender paradigms and scripts. As gender non-conformity became pathologized, and the science of sex came to rule the 'Truth' about gender, access to SRS was restricted and required a significant series of diagnoses, tests, and commitments from the individual. Under the rules set out in the DSM, for example, to be cleared for surgery an individual had to state that s/he had always felt trapped in the wrong body, wanted to be normatively gendered after going through sex reassignment surgery, and aspired to a 'stealth' (i.e. keeping secret one's transgender status) heterosexual life. The required statements also implied that individuals would leave behind any transgender identity, community, or activism. While many people genuinely held the obligatory feelings, beliefs, and outlook, and still others may have come to experience them as genuine, the prerequisite adherence to these dictums is tied up with hegemonic gender paradigms. By requiring a very specific transgender script, psycho-medical gatekeepers were able to reinforce hegemonic gender scripts and beliefs in the process. The advent of modern medical technologies not only changed how science and medicine made sense of gender and gender non-conformity, it created new technologies of power which influenced how individuals experienced and made sense of their own gender non-conforming bodies and identities.

We also see the symbiotic relationship between hegemonic gender paradigms and transgender treatment in the public response to gender non-conformity. Hand in hand with the demand for a particular and restrictive narrative for 'treatable' gender non-conformity has come criticism of transgender individuals as dupes of the gender system.⁷⁵ Scientists, scholars, and people at large have held transgender

individuals to more stringent standards of gender-norm resistance than cisgendered people. Transgender people have been accused of somehow maintaining hegemonic gender norms and inequalities, of destroying gender diversity, of failing to be gender non-conforming at all times and of simultaneously being too flamboyant, radical, or militant. Essentially transgender people have been held responsible for maintaining the entire gender system through their own 'normative' masculinities or femininities while simultaneously being required to produce hegemonic gender to access medical services.⁷⁶ Applying these disproportionately rigorous standards to those who practice gender non-conformity is a technology of power still being used to downgrade the social status of transgender people. While all members of a society conform to, uphold, resist, and rewrite normative gender scripts through day-to-day interactions, holding transgender people accountable for both the conservation of hegemonic gender norms and preservation of gender diversity has let non-transgender individuals off the hook. In reality, the process of 'doing gender' is one in which we all participate and therefore all have the ability to use technologies of the day to challenge, rewrite, and expand socially available gender scripts.

New Technologies, New Genders

The rise of medical science to the peak of social influence is the technological development that has offered the greatest possibility for the creation of new and more diversely gendered bodies. Individuals are now able to choose a variety of medical interventions to produce new and varied gendered identities and bodies. These interventions include hormone therapies to produce masculine or feminine secondary sex characteristics and various plastic surgeries ranging from procedures to remove or implant breasts in order to mimic established gender characteristics, to sex reassignment surgeries that create differently gendered genitals. Medical science has simultaneously taken on the job of policing gender and sexuality through the pursuit of pathological diagnostic and curative models and treatments. While pathologization of gender non-conformity has been contested over the past 25 years, reducing

its dominance, these scientific standards continue to hold sway over and have very real impact on the lived experiences of transgender individuals.

Neither technologies nor scripts are deterministic; they do not lead to one outcome, one set of gender scripts adopted by everyone, or one product, sign-system, power, or self. Their resonance and impact is mediated by particular social contexts and personal histories. To fully consider how technologies have shaped gender historically and in our current society, one must keep in mind the complexity of these relationships. As I examined earlier in this chapter, the use of medicine as a technology of power is not unique to gender; medical science has been used to enforce the racial and class-based status quo throughout history.⁷⁷ Science is, of course, the most legitimized knowledge source within a scientific paradigm, and the attendant scientific and medical technologies are used to uphold and defend established social inequalities and prejudices. With regard to the application of gender curative therapies, for example, these therapies are disproportionately directed at young boys; we have much more tolerance for gender non-conformity in girls. This asymmetry is predictable given our societal privileging of masculinity and its attendant traits; to value the desire to be a boy is much more understandable than the reverse.

Even when new gender scripts are put forward, as in cases of transgender social movements (see the case study on transgender organizing and the Internet for a more detailed discussion), their legitimacy to others remains constrained by hegemonic paradigms. Leslie Feinberg has been a transgender author, activist, and transgender pioneer for the last 40 years. *Ze* has written numerous fictional and nonfiction books

GENDER NEUTRAL PRONOUNS

Ze is an alternative pronoun used by some transgender individuals to express the fact that they identify neither as a man nor a woman. Similarly, *hir* is used instead of *his* or *her*. These pronouns have been suggested by some activists like Leslie Feinberg as new ways to refer to individuals that transcend the gender binary.

about transgender lives and has toured the country speaking at activist, educational, and political events.

In hir transgender history, *Transgender Warriors*,⁷⁸ ze shared a story common to hir experience.

"You were born female, right?" The reporter asked me for the third time. I nodded patiently. "So do you identify as female now or male?"

She rolled her eyes as I repeated my answer. "I am transgendered. I was born female, but my masculine gender expression is seen as male. It's not my sex that defines me, and it's not my gender expression. It's the fact that my gender expression appears to be at odds with my sex. Do you understand? It's the social contradiction between the two that defines me."

The reporter's eyes glazed over as I spoke. When I finished she said, "So you're a third sex?" Clearly, I realized, we had very little language with which to understand each other.

When I try to discuss sex and gender people can only imagine woman or man, feminine or masculine. We've been taught that nothing else exists in nature.⁷⁹

Leslie Feinberg's poignant reflection about hir own illegibility points to how our ability to make sense of an individual's sex and gender rests in part on the gender scripts available to us. Try as she might, the reporter could not understand what Feinberg meant by transgendered, in part because she had no corresponding gender script on which to draw.

As Feinberg's experience of invisibility renders visible, the stakes are obviously high for transgender people. But these controversies also affect cisgender individuals; we are all influenced by and involved in the creation of gender(s). The creation of new gender scripts benefits all people, not just transgender individuals. One set of new scripts might validate a wider range of emotions for men, allowing them to express themselves more freely; other new scripts could change expectations for women's body size, moving us from a society where most women dislike

their bodies to one where most women held positive body images. As Cressida Heyes concludes, "a wide range of gendered subjects stand to gain from challenges to enforced binaries within the nexus of sex, gender, and sexuality."⁸⁰ And yet, our ability to recognize and legitimate new gender scripts remains limited by the dominant ideologies and technologies of the day. As new technologies emerge, however, the ability for individuals to transform their own bodies and identities, and to share new gender scripts and ideologies expands.

People continue to refuse to conform to gender norms, of course, just as some have throughout history. Alongside these changes in technologies and normative definitions, gender non-conformity has manifested differently as well. It is continually shaped by the technologies available for the production of gender as well as by the social gender scripts of the era. Trying to make sense of gender non-conformity by isolating it, either by viewing it as solely a biological hiccup, or entirely a product of social experiences and choices, elides the complexity of transgender experience. Only when we examine gender as a product of the varied, complex interplay of biology, social scripts, dominant ideologies, personal histories, and technology can we develop an understanding of gender and sexuality that reflects the diversity found in society. Approaching the analysis of gendered lives and technological innovation together reveals how they are mutually constituted alongside dominant ideologies and scripts.