

10 Transmasculinity and the Voice

Gender Assignment, Identity, and Presentation

Lal Zimman

INTRODUCTION

In her groundbreaking book, *Female Masculinity* (1998), Halberstam argues that masculinity studies must go beyond the limiting focus of masculinity among men. Though this chapter is not about female masculinity per se, I share Halberstam's concern in teasing apart the numerous layers or facets of genders that make the notion of female masculinity possible. I approach this issue through a focus on the role of the voice in constituting the masculine gender positionalities of trans men and others on the transmasculine identity spectrum. *Transmasculine* is an umbrella term referring to individuals who were assigned to a female gender role at birth but at some point come to self-identify as men, or with some other masculine identity, rather than seeing themselves as women.¹ Transmasculinity is not a special—or single—type of masculinity. It is more aptly described as a context: masculinity as enacted by people with transgender identities. In truth, the masculinities of trans people overlap in many ways with those of non-trans men. But they also invite us to be more precise in our definitions, to consider the full range of genders that can be classified as masculine, and to examine the boundaries that delineate categories like 'masculinity' and 'men.' It is in this way that the analysis herein serves to dislocate elements of masculinity that are often collapsed: masculine embodiment, subjectivities, semiotic enactments, and interactional reception. Importantly, these layers of masculinity may or may not align according to the standards of hetero- and cis-normative² cultural contexts.

In the realm of transmasculine linguistic practices, the voice in particular calls for attention to the relationship between sex, gender, and sexuality, and to the complexity of each of these social constructs. This chapter draws on a two-year sociophonetic ethnography carried out within several overlapping communities of transmasculine individuals in the San Francisco Bay Area from 2010 to 2012. The project focuses on the changing voices of 15 English speakers in the early stages of testosterone therapy, which typically causes a salient drop in vocal pitch along with other forms of physical masculinization. As participants approach and cross over the border that divides female- and male-sounding voices, the goal of this project was to

track changes in their vocal pitch along with shifts in vowel formants and the acoustic characteristics of [s], each of which carries gendered indexical weight. In this chapter, I focus on [s] as a window into the diverse range of masculinities with which my participants aligned, and the multi-faceted perspective on gender that is necessary to explain this variation.

The chapter begins with an introduction to transmasculine subjectivity and the distinction many transmasculine people make (along with some gender theorists) between gender assignment, gender role, gender identity, and gender presentation. Along with a more fluid and context-sensitive understanding of physiological sex and of sexuality, this multi-layered approach to gender can take us beyond the now widely recognized division between social gender and biological sex. In section 3, I present variation in the acoustics of [s] to explore both inter-speaker and intra-speaker differences. These findings, I argue, demonstrate that sex, gender identity, gender assignment, gender presentation, and sexuality each have a role to play in accounting for phonetic expression of transmasculinities. Transmasculine speakers' complex alignments and disalignment with various kinds of masculinities provides a concrete reminder of the nature of gender, sex, and sexuality as multi-faceted and flexible phenomena that resist binary coding schemas.

In complicating our understanding of the relationship between these layers of gender, transmasculine speakers also challenge our understanding of how masculinity and power interact. Trans people have often been either held up as the ultimate gender transgressors or as traitors to the gender revolution for their purported gender normativity and acquiescence to dominant gender norms. Yet the implications of trans speakers' appropriation of the semiotic resources associated with masculinity have a less certain valence given the variety of linguistic styles and social contexts in which they are situated. Rather than traveling as a package, power, too, may be dislocated from masculinity as speakers selectively draw on different facets of gender to align themselves with masculinity at one moment and criticize hegemonic gender norms at another (see also Zimman, under review).

GENDER AND SEX ARE NOT ENOUGH

In gender studies and its allied fields, it has become commonplace to distinguish between *sex*, in reference to the gendered characteristics of the body, and *gender*, in reference to the social roles and norms ideologically linked to biological sex. One of the key contributions of poststructuralist feminism, however, is that sex and gender are both social constructs (Butler 1990, 1993; Delphy 1993; Nicholson 1994; for a linguistic perspective see Motschenbacher 2009; Zimman and Hall 2009; Zimman 2014). One of the clearest illustrations of these processes is the way dominant medico-scientific discourses about the body treat sex as a binary opposition between two, and only two, types of bodies. This system is naturalized, but in fact requires the

erasure of many forms of embodiment that resist categorization as female or male (particularly intersex embodiment; see Fausto-Sterling 2000). Anthropologists have also documented some of the ways that sex differs across cultures. In a now classic study, Herdt (1993) discusses one intersex condition that occurs with greater frequency in certain communities and leads to a female-appearing body until masculinization occurs at puberty. Previous accounts of populations in the Dominican Republic argued that hormonal masculinization activates a biology-driven male gender identity. Yet Herdt paints a different picture for the Sambia of Papua New Guinea, who recognize intersex people as members of a locally recognized third gender category. Even in Western contexts, and even for normative bodies, the idea that men and women occupy fundamentally different biological categories is relatively new. Laqueur (1990) makes this argument as he traces the development of biological sex as a Western scientific concept. Through analysis of the historical record, Laqueur demonstrates that until the last few centuries male and female bodies were seen as occupying a single continuum, with female embodiment being conceptualized as an under-developed version of male embodiment, much as young boys and girls are seen as less developed versions of adult men and women (while still being members of the same sex). As a result, scientific texts and jargon did not distinguish terminologically between body parts like *penis* and *vagina* (or, at other times, *penis* and *clitoris*) or *ovaries* and *testes*. This perspective is obviously problematic on a number of grounds, but it illustrates that one need not look far to find that contemporary Western discourses about biological sex are not universal.

Bodies are also malleable. The transmasculine speakers who are the focus of my research underscore this fact, as they are all making use of testosterone therapy to masculinize their bodies. This is one of the most common medical interventions used by transmasculine people and over time such a treatment regimen typically has dramatic effects on secondary sex characteristics such as body and facial hair, the distribution of muscle and fat, and vocal pitch. Yet it is not only trans people who modify their biological sex. The normatively gendered, too, shift their gendered embodiment through choices about food consumption, exercise, hair-style, clothing, body hair removal or growth, and so forth. As we consider the ways gendered embodiment interacts with the voice, it is important to keep in mind that sex is not static, not purely natural, and that it does not necessarily cause gender differences even where correlations exist. These terminological issues are academic in nature, but they are also important to the participants in my research. From here, I turn to the distinctions between gender assignment, role, identity, and expression as they are discussed by transmasculine people themselves.

At the beginning of this chapter, I defined transmasculine people as being individuals who are “assigned to a female gender role at birth.” Though common usage might refer to transmasculine people as having been ‘born female,’ this language has fallen out of favor in many trans communities because of the way it naturalizes a person’s apparent sex at birth while

treating trans identity as something other than inborn. Many trans people, like others in LGBT communities, describe themselves as being innately trans by birth, some invoking the so-called brain sex theory, which allows for the possibility that trans men have brain structures that resemble non-trans men's, whereas the inverse is true for trans women (though see Fausto-Sterling 2000 for a critique of the brain sex theory). From this perspective, trans men's bodies can be seen as at least partly biologically male, even if no medical interventions are made through hormones or surgery. In a more radical approach, some trans men contest the idea that their bodies are in *any* way female by referring to themselves with the body part terminology typically used for non-trans men, which I have discussed at greater length elsewhere (Zimman 2014). One trans man in my study, Dave, advocated for the then-new acronym (C)AFAB and (C)AMAB, found in activist circles as a way of referring to people as '(Coercively) Assigned Female/Male At Birth.' This move unsettles the notion that trans people are agents in choosing to change gender categories and instead emphasizes the more powerful social forces that assign us to a gender without our consent. For the purposes of the analysis below, thinking about gender assignment gives us an opportunity to consider the effects of childhood socialization, for instance, and ask how transmasculine individuals' gender assignment might shape their linguistic practices without conflating gender assignment and biological sex—a confusion that both naturalizes the gender assignment process and obscures the fact that assignment and sex may not align in normative ways. Gender assignment is designed to determine gender role, a somewhat nebulous concept meant to unify the social positionalities one occupies in everyday interactions, both personal and institutional. The transition from female to male, or vice versa, is frequently framed in terms of a change to biological sex, as references to 'having a sex change operation' suggest. Yet it is the social transition from one gender role to another that my participants, and many other trans people, emphasize as having the most profound effect on their day-to-day lives. Corporeal changes are important in large part because they facilitate a social transition in a society where biological sex and social gender are expected to "match."

Gender presentation or expression highlights the semiotic manifestations of gender and the various ways that an identity like "man" can be enacted. Gender expression consists in part of visual elements like clothing choices, hairstyle, and the presence of facial hair, makeup, and other forms of gendered body modification. Bodily hexis, including gesture, gait, posture, and so on, is also a semiotic resource for gender presentation. Even the body itself can be read as a part of gender expression—for instance, the display of muscle mass or fat, or their absence. And, of course, one of the crucial ways that masculinity and femininity are enacted semiotically is through the voice and linguistic practice more generally.

Men and other masculine people have a huge range of gender expressions, including both normative masculinities that align with dominant cultural

expectations for men's social practices as well as innumerable non-normative masculinities, and femininities, that in some way or another stray from, or blend, these norms. Norms for gender presentation vary considerably across communities, of course, and one man's machismo is another man's effeminacy. In older models of transsexuality, which continue to guide clinicians in many places, masculinity or femininity in gender expression are among the prime diagnostic cues of authentic trans identity (Benjamin 1966). Transsexuals are expected to have a lifetime of rejecting masculinity, if they were assigned to a male gender role at birth, or femininity, if they were assigned to a female role. Trans men should prefer playing with trucks and hate dolls, wear conventionally masculine clothing, be attracted to women and only women, and otherwise meet the demands of hegemonic masculinity. With the rise of *transgender* in the 1990s as part of a challenge to the gender normativity built into definitions of transsexuality (see Stryker 2008; also Valentine 2007), services like hormone therapy became available to people with a wider range of gendered positionalities, with cities like San Francisco leading this trend. In the San Francisco Bay Area in 2010 to 2012, many transmasculine people on testosterone explicitly rejected the idea that they should conform to the demands of hetero- and cis-normative masculinity.

Of course, self-identification as transmasculine suggests some affiliation with masculinity, but the nature of that affiliation varies wildly. In Table 10.1, I have roughly summarized my 15 participants' gender identities, gender presentations, and sexual orientations, using their own words taken from interviews and conversations. As the table indicates, several of my participants saw themselves as having quite normative enactments of masculinity—an assessment with which I and members of their immediate communities agree. Adam, for instance, has had a very masculine gender presentation his entire life. From the time he came out as a lesbian at age 19 until he started his transition at 38, he lived as a butch lesbian who also used the word “transgender” as an identity label beginning several years prior to the start of his medical and social transition from female to male. Adam is from the suburbs north of New York City, where he grew up in an Irish and Italian family with strong ties to their local Catholic community. After years of being visibly queer, Adam told me he was somewhat disappointed that his masculinity is “pretty conventional,” given his classic dress style and affective reservation (a disappointment that drives Adam to maintain a strong identity as a trans man, a point I will discuss shortly). On the other hand, my participants also included people on the other end of this spectrum, who had quite feminine gender presentations before their transitions, and who in some cases maintain their outward expression of femininity through their transitions. The best example here is Dave, a white, middle-class trans man originally from the San Francisco Bay Area in his early 20s whose gender identity is strictly and simply male but who describes his gender presentation as “fem.” He indexes his femininity with his preference for tight, form-fitting clothing, often in bright

Table 10.1 Participants' self-described gender identities, presentations, and sexualities

Speaker	Gender identity	Gender presentation	Sexuality	Attracted to . . .
Ethan	Man	Typical guy	Straight	Women
Joe	Man	Regular guy	Straight	Women
Mack	Man, trans man	Regular guy	Straight	Women
Carl	Trans man	Nerdy kid	Queer	Women
Jeff	Trans man	Sensitive, spiritual trans guy	Queer	Primarily men
Adam	Trans man	Conventionally masculine	Queer	Women
Tony	Trans man	Typical guy	Queer	Women & trans men
Kyle	Trans man	Blend of queer, outdoorsy & feminist masculinities	Queer	Primarily women, but since transition men as well
Jordan	Trans man	Masculine	Queer	All genders
Elvis	Genderqueer, transgender, but prefers not to use gender labels	Masculine, sensitive guy	Queer	Women & men
Kam	Genderqueer, trans boy	Fem	Queer	Masculine people
James	Genderqueer, trans boy	Mixture of masculine and feminine	Queer	All genders
Pol	Genderqueer, trans boy	Dandy	Queer	Women
Dave	Man, trans man	Fem	Queer	All genders
Devin	Genderqueer, transgender, but prefers not to use gender labels	Mixture of masculine and feminine, androgynous	Queer	Primarily men

colors or flamboyant prints. Dave is small in frame and stands just over five feet, but is usually perceived as male due in large part to his facial hair and low-pitched voice. Although it is low-pitched, Dave's voice is also extremely "queeny," as he puts it. He makes ample use of falsetto voice quality, wild excursions in pitch range that contribute to his engaging and expressive interactional style, and, as the analysis below reveals, he also has among the highest frequency productions of [s] among the speakers in my study. Among those that fall somewhere between Adam and Dave are participants like James, who blends masculine and feminine stylistic elements as part of his genderqueer identity and expression. James is a 26-year-old

white, upper class, genderqueer trans boy from Massachusetts who embodies a scruffy, punk aesthetic with simple clothes adorned with hand-modifications like patches, pins, and other slogans of anti-authoritarianism. But he blends this rather masculine baseline style, which is enhanced by his unshaven facial hair, with much less normatively masculine accessories like the bright green bandana he had tied around his neck when we first met, the glittery jewelry he habitually wears in his facial and ear piercings, and toenail polish in always changing colors.

Trans men like Dave who embrace femininity are often met with confusion or even aggressive challenges from people in their lives who cannot reconcile their self-identification as men with their feminine self-presentation. But it is precisely this distinction between identity and presentation that makes Dave's self-understanding as a fem trans man possible. In transgender communities and the academic fields engaged with them, the phrase *gender identity* has been used to talk about an individual's self-identified gender category—in other words, whether one thinks of oneself as a woman, as a man, or with one of the other gender categories available in a given community. We can expand on more traditional definitions of gender identity—as self-identification as female or male—to include identifications like *cisgender* versus *transgender*, *genderqueer* versus *trans(gender)*; *man* versus *trans man*; and *trans man* versus *trans boy*. Yet identification as a man, a trans man, a boy, or genderqueer does not predict gender presentation.

Some of the participants in my research identify strongly with conventional labels for masculine identities like *man* and *male*. Joe, for example, a 40-year-old working-class white man from Chicago who began his transition following a long entanglement with drug addiction and incarceration in a women's prison, told me he felt more like “a regular guy” than a trans guy. Although he recognizes that his life has been quite different from most men's, Joe doesn't see his trans status as a strong component of his identity. His gender presentation, too, is normatively masculine: he wears his blond hair in a cropped cut that goes well with his athletic wardrobe including numerous sports jerseys and—as Joe is a true Chicagoan—a well-worn Cubs baseball cap. He would often meet me between trips to the gym when I would visit him in the quiet, affluent San Francisco suburb where he had been placed in a sober living house for women that left him feeling like an outsider much of the time.

A larger number of my participants, in contrast with Joe, identify most strongly with the identity *trans man*. Trans men feel that their gender-crossing experiences are significant enough to constitute a distinct gender identity that is separate from the category of “man.” Trans men who have spent many years in lesbian communities may also invoke their sense of connection with queer or gender non-conforming women as a distinguishing quality that separates them from non-trans men. Yet it isn't necessarily lived experience that distinguishes the trans men from the men—consider that Joe, too, identified as a lesbian for many years. In either aligning or

disaligning with the unmarked identity *man*, the participants in my study are engaged in the processes Bucholtz and Hall (2004, 2005) have identified as adequation and distinction. Those who identify simply as *men* employ the tactic of adequation by emphasizing similarities between themselves and non-trans men, whereas the individuals who self-identify as trans men emphasize the differences they see as significant.

An example of someone who variably aligns with both the unmarked identity *man* and the unique identity *trans man* is Mack. In one of our conversations in his home in San Francisco, Mack told me about his relationship to various shades of transmasculine identity, which I excerpt below. He is a 46-year-old straight white trans man who grew up in a working class family that moved around among the suburbs of the San Francisco Bay Area but has origins in the southern United States. After living as a lesbian for several decades, though always with an uneasy relationship with that label, Mack came to see a male identity as a more authentic expression of his inner self. He had been on testosterone for nearly a year and a half when we had this conversation, though he still occupied a somewhat androgynous social space due in part to his intentionally slow transition, which he preferred in part to make the process easier on his college-aged son. Just prior to the discourse in Excerpt 1, Mack had told me about the trouble he has relating to transmasculine people who identify as somewhere in between male and female, or who maintain strong ties with queer women-centered communities or identities. As a follow-up, I asked him whether he relates to the identity *trans man* as a category distinct from *man*. Although Mack tells me that he feels like he “*should* be a regular straight guy” (emphasis mine), he “wonder[s] if that’s really possible” for him (lines 10–12).

Excerpt 1, Mack (70 weeks on testosterone)

- 01 LZ: What about, like, guys who specifically identify as, like, not men
 02 much as, like, trans men. As like, almost like a third category. Do you
 03 understand that perspective, or?
 04 MD: Yeah, I understand that. Yeah, I do, I do. And uh. Because I feel
 05 like, I wonder about myself, if, like once my transition is done,
 y’know?
 06 And, y’know, I’m physically male and being perceived as male, moving
 07 through the world as male, I have this sneaking suspicion in the back of
 08 my mind that the end product isn’t gonna be a regular average male
 09 anyway. Y’know, just because uh, of my upbringing and all my years of
 10 female socialize-socialization? Y’know? So I feel-although I feel like
 11 I should just be like a regular straight guy, I- I kinda wonder if that’s
 12 really possible. Y’know, in me, anyway. Y’know, when I think about me.
 13 So, I- I- I- I think I understand guys like that, y’know. (.) I mean,
 14 never had a male boyho-, never had male adolescence, y’know?

Here, Mack invokes the fact that he did not grow up in a male gender role, and the socialization experiences he missed out on as a result, as something that differentiates him from non-trans men. Transmasculine people who identify as simply men, by contrast, might interpret the same experience through a lens of adequation and thus highlight the fact that men have a wide range of socialization experiences and that many men grow up without the archetypal experiences of white, middle-class American boyhood but see themselves as men nonetheless. Importantly, when Mack wonders whether it's possible to turn out as a "regular straight guy," he quickly adds the twice-repeated caveat "y'know, in me, anyway" (line 12), reflecting a tension in the community and his awareness that some trans men do see themselves as "regular straight guy[s]" regardless of their socialization experiences.

Other transmasculine people are uncomfortable with the word *man* in any context, and instead situate themselves somewhere else on the gender continuum. Three of the speakers in my study, James, Pol, and Kam, describe themselves as *trans boys* rather than *trans men*. These boys also use the word *genderqueer* to describe themselves, as do Elvis and Devin. The latter two, in addition to using the words *genderqueer* and *transgender* in certain contexts, also told me that they prefer not to put their identity to words if they don't have to. Nearly all of the accounts I got when I asked about why my participants identified with the categories they do emphasized a subjective sense of authenticity. "It just feels right," as Dave put it. These uncomplicated explanations depart radically from those elicited in studies of trans identity narratives like Gagné and Tewksbury's (1997), which suggests gender stereotypes form the basis of transgender people's sense of gendered authenticity (see also Zimman 2009). Authenticity is key, to be sure, but for the speakers I describe in this chapter, the authentic self is derived from an abstract, yet deeply felt, sense of self.

My discussion of gender so far is separable from sexuality, in the sense that all of the identities I have described can be paired with any sexual orientation. But sexuality is also a lens through which transmasculinity is constituted. And it is clear that, for the participants in my study, identification as *queer* or *straight* (the two primary identity labels they used) is driven not only by erotic attraction but also by gender identities and gendered life histories. Here, as with gender, transmasculine people are by no means unique in this respect, but the ways in which they describe their identities challenge mainstream assumptions about the nature of sexuality-driven identities. As Table 10.1 shows, 12 out of the 15 the participants I analyze here describe themselves as *queer*; the remaining speakers, Mack, Joe, and Ethan, self-identify as *straight*, based on their identities as men who are attracted only to women. Yet this only tells us part of the story, because Carl, Pol, and Adam are also attracted only to women, yet they invoke their gender identities as trans men, as well as their relationships and histories with queer women, in explaining why they identify as queer rather than

straight. Other transmasculine individuals identify as queer because of their attraction to men; if they are also attracted to women, they might think of these attractions as either straight or queer. Finally, many trans people are attracted to genders that are outside of a simple male-female binary, and identification as queer can signal that their desires go beyond binary-based labels like *bisexual*.

There are a few important points to take away from this section before moving on to my analysis. First, people who describe themselves as transmasculine lay claim on an array of gender identities and gender expressions. Second, the layers of identity, presentation, assignment, and embodiment that transmasculine people invoke in talk about gender provide a vocabulary for understanding the linguistic variation I am about to describe. Importantly, none these factors necessarily aligns with the others in predictable ways. But this is not true only for transmasculine people. Even as transmasculinities bring the dislocations of gender into sharper focus, gender assignment, expression, and identity are elements of gender-normative non-trans women's and men's experience as well. Sex and gender are not enough.

GENDER, THE VOICE, AND TRANSMASCULINITY

The phonetic characteristics of the voice include some of the most salient sociolinguistic indexes of gender, and in the burgeoning field of sociophonetics the sibilant consonant [s] has recently received a great deal of attention as an index of gender and sexuality. Though biology continues to be prioritized as the most intuitive explanation for gender differences in the voice within the phonetically oriented literature (e.g., Fuchs and Toda 2010), evidence weighs strongly on the side of social explanations for gendered variation in [s]. Support for this conclusion comes from at least four sources. First, the acoustic properties of [s] do not vary between women and men consistently across languages and cultures. Among speakers of American English, a number of studies have found that women and girls produce [s] at higher frequencies than men and boys. A summary of studies in Flipsen et al. (1999) suggests that the mean frequency of [s] in read speech is within the range of 4,000–7,000 Hz for men and 6,500–8,100 Hz for women (see also Tjaden and Turner 1997). Yet studies such as Gordon, Barthmaier, and Sands (2002) compare seven unrelated languages (Aleut, Apache, Chickasaw, Scottish Gaelic, Hupa, Montana Salish, and Toda), only one of which showed gender differences in the mean frequency for [s] (Chickasaw). Similarly, Heffernan (2004) suggests that sibilants provide a more robust gender marker for Canadian English speakers than for speakers of Japanese. This is especially striking given reports that Japanese has more dramatic gender differentiation in pitch than does American English (e.g., Ohara 2001; Yuasa 2008), suggesting that it isn't lack of attention to the gender binary that is keeping Japanese speakers from utilizing [s] to index gender.³ Second, there

is also considerable intra-cultural variation in the gendered properties of [s] among speakers of the 'same language.' Stuart-Smith's (2007) study of Glaswegian English reveals that although adult men in Glasgow tended to produce [s] at a lower frequency than their female counterparts, a different pattern appeared among adolescents. Middle-class teenage girls patterned with the adult women in terms of the most prominent frequencies in [s], but the [s] of working-class teen girls was closer to the adult men's. On the other side of the Atlantic, several studies have identified [s] as one of the most consistent and most salient cues for the perception of sexual orientation among American and Canadian English-speaking men (e.g., Smyth and Rogers 2002; Munson 2007; Zimman 2013), demonstrating that adult men are entirely capable of producing a high frequency [s]. Third, studies of [s] in the speech of children and adolescents show that gender differences emerge as early as nine years old (Flipsen et al. 1999) despite the fact that gender differences in vocal anatomy do not emerge until puberty. Finally, data taken directly from anatomical measures supports a social, rather than biological, explanation. Fuchs and Toda's (2010) recent investigation of [s] in German and English used electropalatography to consider whether articulatory behavior or anatomical differences between men's and women's palates best explain gender differences in [s]. The authors argue that gender-based differences in this sound, which were present in both languages, are partly the result of social factors and partly the result of biological factors. However, their data offer only weak evidence for this claim. Fuchs and Toda's data showed no significant correlations between gender and palate size for the 12 German speakers in the study, and the correlation reported between gender and palate length among the 12 English speakers only approached, and did not reach, statistical significance.

The importance of social factors in explaining gendered [s] is clear. What we know less about is the process whereby this gender difference emerges. Flipsen et al. (1999) point us to childhood language socialization, but how can that be the whole story, given the variability reported here? Stuart-Smith (2007) argues that it is critical to distinguish sex differences in the voice, which are biological in nature, from gender differences, which are socially learned. I have already discussed how both gender and sex can be complicated beyond a simplistic binary, and in the remainder of this chapter, I show the usefulness of this complex theoretical perspective in explaining one aspect of the gendered speaking styles of transmasculine people.

Background on the Study

As I mentioned in the introduction, the analysis I focus on in this section is based on a two-year ethnographic study of transmasculine people in the San Francisco Bay Area during their first year on testosterone. From 2010 to 2012, I recorded 15 transmasculine individuals on a regular basis, forming

a body of data that includes interviews, read speech, and everyday interactions. All of these speakers were undergoing masculinizing hormone therapy, which brings about a salient drop in vocal pitch as well as other forms of physical masculinization, but has no direct effect on socially learned articulatory habits. In the larger version of this study, I track my speakers' changing voices through an analysis of pitch (fundamental frequency), vowel formants, and the acoustic characteristics of [s] in order to better understand how these speakers cross over the border that separates voices perceived as female from those perceived as male.

In this analysis, I focus on my participants' production of [s] in read speech. I recorded these speakers reading the Rainbow Passage (Fairbanks 1960) approximately once each month for the duration of my speakers' participation in my study, which lasted one year or longer for most participants.⁴ In the analysis below, I focus on inter-speaker variation in the realization of [s] by these transmasculine individuals. I also provide a brief summary of some of the intra-speaker changes that occurred over the course of this project, which is necessarily limited by space constraints. Importantly, I do not treat read speech as representative of how my speakers use their voices in other contexts. In some studies, this is a major limitation of read speech, but in this case it provides a special set of insights precisely *because* of the way it calls attention to the act of speaking. In this way, read speech is a kind of performance in the anthropological sense, which is to say it is a genre that opens a space for reflection on social and linguistic norms both for performers and audiences (see, e.g., Bauman and Briggs 1990). For transmasculine individuals in transition, who are already acutely tuned in to the ways their bodies and voices are changing, self-conscious speech creates an opportunity for a distinctly gendered performance. That is not to say that the voices my speakers use while reading are somehow more artificial than other speaking styles they (or others) might employ. Rather, I want to point out that the linguistic analysis of performance can bring its own set of insights on the ways cultural norms and practices are negotiated, resisted, valorized, or otherwise oriented to. Analysis of everyday, 'vernacular' speech may show unguarded moments in which unwanted styles or characteristics slip through, for instance, but analyzing read speech can shed light on the gendered personae my participants *want* to enact, revealing much about their linguistic goals and desires.

Methods

My analysis is based on the same set of 14 word-initial tokens of [s] occurring in the Rainbow Passage, which each speaker recorded anywhere from 2 to 13 times over the course of their participation in this study; see Table 10.2 for the total number of recordings and tokens analyzed for each individual. Recordings were made on a Fostex FR-2LE Field Recorder with an Audio-Technica BP892 headset microphone, at a

Table 10.2 Center of gravity for [s] for all speakers

Speaker	Total # of recordings	Total # of tokens	Mean COG for all tokens
Ethan	4	56	5,226 Hz
Joe	5	70	5,788 Hz
Mack	11	154	5,921 Hz
Carl	9	126	6,579 Hz
Adam	12	168	6,705 Hz
Tony	10	140	6,727 Hz
Jeff	3	42	6,728 Hz
Kyle	13	182	6,819 Hz
Jordan	2	28	7,338 Hz
Elvis	9	126	8,128 Hz
James	8	112	8,196 Hz
Pol	8	112	8,264 Hz
Kam	4	56	8,267 Hz
Dave	11	154	8,905 Hz
Devin	13	182	9,188 Hz
Total range			5,226–9,188 Hz

sampling rate of 44,000 Hz. Prior to analysis, audio files were put through a Hann pass filter to remove sound below 1,000 Hz and above 13,000 Hz, which helped eliminate potential background noise. This preserves the range of approximately 4,000–10,000 Hz in which the bulk of acoustic energy for [s] occurs (e.g., Shadle 1990). For each token, a spectral slice was created at the midpoint, following Flipsen et al.'s (1999) finding that gender differences are most apparent at midpoint.

There are a number of ways to measure the acoustic characteristics of [s] (see Stuart-Smith 2007 for a useful review). In this study, I make use of Praat's moments analysis function, which calculates a weighted mean frequency for [s] referred to as center of gravity. As I mentioned above, American English-speaking women have been shown to produce [s] with a higher mean frequency than men, whereas among men, a higher frequency [s] may be interpreted as indexing a gay or otherwise non-normative masculine identity.⁵

In order to analyze how [s] changed over time for the 10 speakers I recorded for a full year or longer, I constructed a series of mixed effects linear regressions. First, data for each speaker were analyzed separately to see if their production of [s] changed over time. Center of gravity was treated as the dependent variable, whereas length of time on testosterone (measured in weeks) was the fixed effect explanatory variable under investigation. This choice was not made because time on testosterone would directly affect the pronunciation of [s], but rather because time on testosterone can serve as a benchmark for the time elapsed since these speakers began their embodied transition process.

Results

First, I present the full range of frequencies for [s] represented in the read speech of my 15 transmasculine speakers. The most important point to note here is the huge range of mean frequencies in these individuals' productions of [s]. In Figure 10.1, center of gravity is plotted for all 15 speakers, who are ordered from left to right according to mean COG frequency, starting with the lowest (Ethan) and ending with the highest (Devin). The notches in the boxplot, which narrow near the black mean bars in the center of each box, indicate significance tests performed by the plotting function in the R statistical computing package. In this case, the notches indicate which speakers have significantly different values for center of gravity from one another. Because the focus of my analysis is the degree of inter-speaker variation in the production of [s] among these individuals, speaker is treated as the main effect in this analysis. If the notches of two speakers overlap (as they do for Joe and Mack, for instance, but not for Mack and Ethan), the difference is not statistically significant. Table 10.2 contains the numerical means for center of gravity as well as total number of recordings and tokens for each speaker.

Next, I discuss change in real time among 10 speakers whom I recorded over the course of a year or more. Table 10.3 presents the results of the linear mixed effects regression I described above. Five of the 10 speakers underwent a significant change in center of gravity over time: Carl, Adam, Tony, James, and Devin. For Carl, this change was toward a higher frequency [s], and for the other four, it was toward a lower frequency. I have

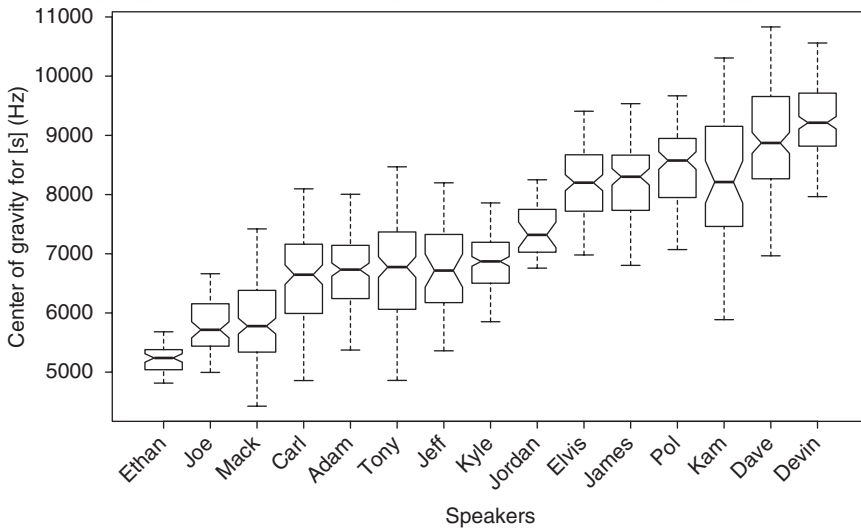


Figure 10.1 Center of gravity for [s] for all speakers

Table 10.3 Changes in center of gravity (COG) over time.

Speaker	Starting COG	Ending COG	Coefficient	<i>p</i> values
Mack	5788 Hz	5933 Hz	-0.0705	n.s. (not significant)
Carl	6522 Hz	6877 Hz	11.37	<i>p</i> < 0.001***
Adam	6867 Hz	6481 Hz	-4.953	<i>p</i> < 0.01**
Tony	6159 Hz	5734 Hz	-10.11	<i>p</i> < 0.02*
Kyle	6777 Hz	6616 Hz	2.343	n.s.
Elvis	7878 Hz	8174 Hz	1.876	n.s.
James	7907 Hz	7717 Hz	-8.862	<i>p</i> < 0.01**
Pol	7983 Hz	8151 Hz	-7.078	<i>p</i> < 0.08 (n.s.)
Dave	9014 Hz	8960 Hz	-0.8757	n.s.
Devin	9459 Hz	8779 Hz	-11.94	<i>p</i> < 0.001***

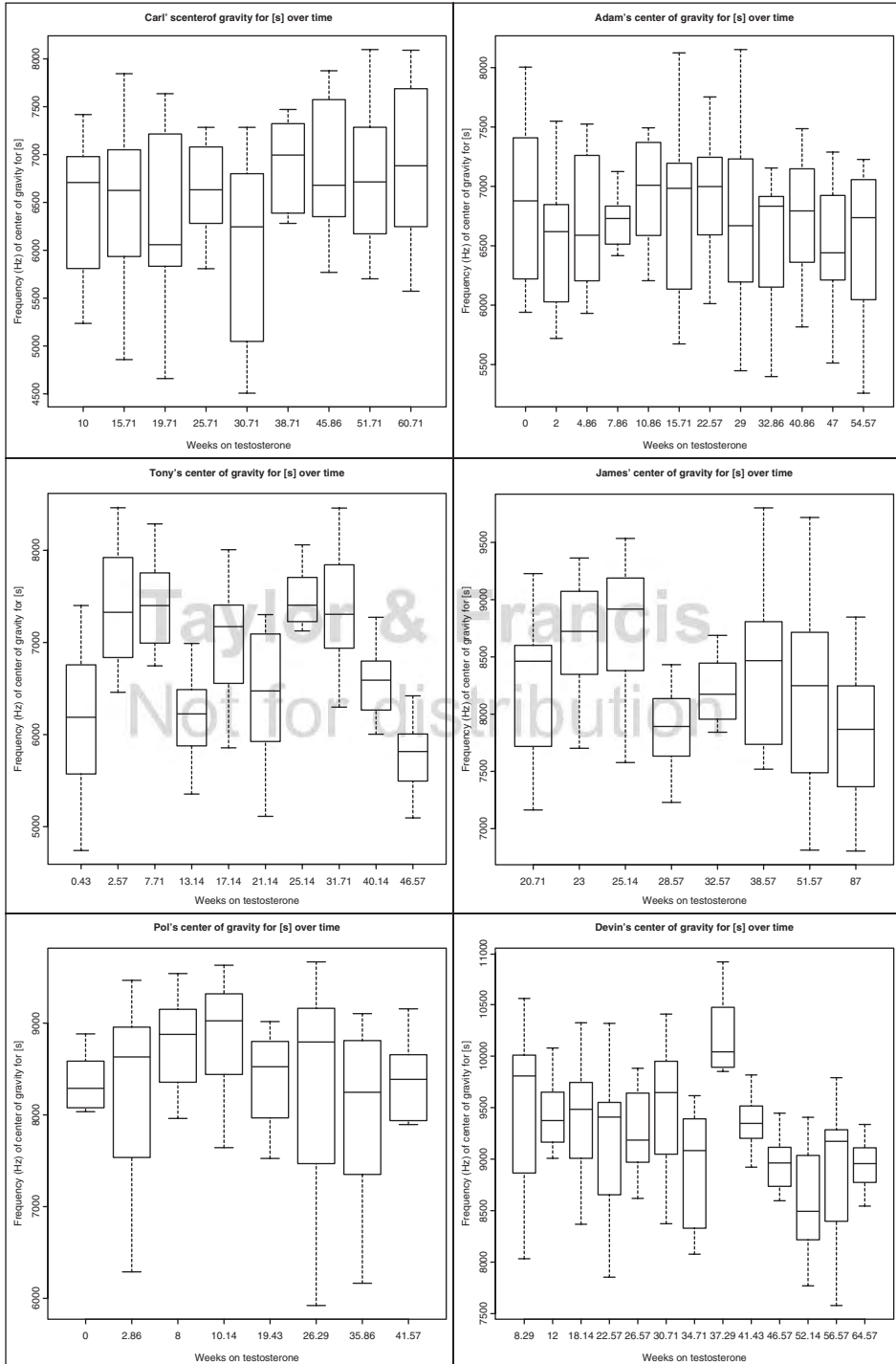
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included each speaker's mean center of gravity (or COG) for his first and last recording, though note that this does not always correspond with the overall trend through all of the recordings (e.g., Pol's "starting COG" is slightly lower than his "ending COG," but the overall trend in his recordings was downward, even though it did not quite reach statistical significance with a *p*-value of 0.08).

Table 10.4 contains plots of the changes over time for the five speakers who underwent a significant shift in center of gravity, as well as Pol as a point of reference as a speaker whose changes in the production of [s] did not quite reach statistical significance. Carl is the only speaker to show a significant upward shift in center of gravity. Carl, along with Adam, shows that change in [s] center of gravity is not a consistent, progressive shift either downward or upward, even when statistically significant change does occur. In the case of Tony, the much greater variability across recordings is likely due to the fact that this speaker has a marked, lateralized [s] that might be identified as a "lisp" or "speech impediment." His productions of [s] were in general far more variable than any other speaker, but in my estimation sounded retracted and in this way contributed to his masculine gender presentation (cf. Campbell-Kibler 2011); in fact, I was surprised that my acoustic analysis did not find lower frequency means for Tony but attribute this discrepancy to the unusual patterns of energy dispersal in the spectral slices created from Tony's [s] tokens. I had the same impression of Ethan, who had the lowest frequency mean in Figure 10.1 and also had an audibly retracted [s] that might be categorized as pathological. James and Pol show a similar pattern in their change over time, with center of gravity rising before falling sharply and then rising again. The overall downward trend for James was significant, but in Pol's case did not reach the threshold of statistical significance at the 0.05 level. Devin shows the most dramatic, and most clearly linear, downward shift in center of gravity, with the exception of one

Table 10.4 Changes in center of gravity over time for individual speakers



recording made at 37 weeks on testosterone. Devin is also the speaker with the most acoustically dramatic and perceptually salient downward shift in vocal pitch among the participants in this study. Compared to the changes in pitch, however, shifts in the acoustics of [s] across these speakers were less dramatic, less salient, and less consistent on a week-to-week basis than were changes happening in these speakers' pitch.

DISCUSSION

Inter-Speaker Variation

One story that could be told about the data I presented above is that some speakers have been more successful than others in masculinizing their voices. Yet this argument depends on the assumption that transmasculine people share the same stylistic target. When we consider the complicated relationships these speakers have with gender, a more compelling explanation brings together each of the facets of gender I identified above.

First, based on what we know about the acquisition of gendered phonetic traits during childhood, it is important to consider gender assignment because of the time these speakers spent being seen and treated as girls and women. Assignment is a useful notion here because it isn't these speakers' biology that is responsible for their articulatory habits, nor is it necessarily the case that they self-identified as women prior to beginning their transitions—some certainly did, but others indicated that they never thought of themselves as female. The latter group describe themselves as actively resisting the femininity imposed on them in childhood, whereas others talked about accepting or welcoming their assigned gender. One interesting account of how my speakers see their gender assignment and socialization as impacting their voices came from Devin, a 24-year-old white middle-class queer person from the Bay Area who prefers not to use identity labels to describe his gender. During our first meeting, Devin and I were sharing a drink at a café in San Francisco where he stopped on his way home from work in the South Bay Area when he recalled thinking, as a child, that his voice was not feminine enough and that he should work harder to sound like other girls—an effort at which he apparently succeeded. Devin made reference to his socialization in explaining how, despite having the most dramatic drop in pitch of any of my speakers, he was still described by a friend as sounding “like a woman with a deep voice” (an evaluation that wasn't a problem for Devin, but would have been received quite differently from this study's male-identified participants). Childhood language socialization, then, can potentially explain why many of the speakers in this study have centers of gravity within the ranges typically reported for English-speaking women.

However, socialization based on gender assignment cannot explain all of the variation represented in Figure 10.1. For speakers like Ethan, Joe, and Mack, who had the three lowest means for center of gravity, the fact that

they are the only participants to identify as straight men is undoubtedly significant. These three men, who are all white, between the ages of 40 and 56, and come from working class families, enact conventional forms of masculinity within the context of their communities and are very comfortable being identified as men. With mean centers of gravity below 6,000 Hz, they are well within the norms for men's center of gravity based on the range I quoted above (approximately 4,000–7,000 Hz). The next group of speakers, whose centers of gravity fall into the range where men's and women's reported productions overlap (6,500–7,000 Hz), can be distinguished in terms of gender identity as well. While Ethan, Joe, and Mack self-identify as straight men, the speakers in the middle group—Carl, Adam, Tony, Jeff, Kyle, and, separately, Jordan⁶—identify as queer trans men. For Jeff, this label refers to his primary attraction to men, but for the others it is a label that they apply to their relationships with women. Most of these queer trans men have relatively conventional gender presentations, as well, compared to some of the speakers I will discuss momentarily. Kyle, however, enjoys blending markers of queer masculinity (e.g., he says likes to “get cute” with his female partner before they go to a club, referencing his makeup and dancing gear) with his outdoorsy and increasingly athletic lifestyle. In fact, trans men like Kyle who prize their affiliation with queer and distinctively transmasculine identities often expressed concern that they would be mistaken for straight non-trans men, and [s] can be understood as a potential resource for distinguishing these speakers from straight men like Mack, Joe, and Ethan.

The speakers who do not identify as men and instead align with labels like *boy* and *genderqueer* (or avoid labels altogether), have significantly higher centers of gravity than the other two groups I have just discussed. This includes Elvis, James, Pol, Kam, and Devin. In fact, several of these speakers' mean center of gravity is beyond even the upper end of the range generally reported for women (8,100 Hz). All of these individuals distance themselves from hegemonic masculinity, linguistically and otherwise. This is evident in their non-normative gender expressions which they describe with words like *dandy*, *queer*, and *androgynous* and which involve more incorporation of markedly feminine signs like Elvis' turquoise rings, James' sparkling earrings, or Kam's lack of interest in binding (i.e., flattening) his chest.

This leaves Dave, who again provides the clearest demonstration that gender identity and gender presentation are distinct for members of this community. Dave does not identify as genderqueer but instead describes himself as a man with a fem gender presentation. His voice is among the most salient means by which Dave constitutes his flamboyantly non-normative take on masculinity, for which he mentions Oscar Wilde as a role-model. In Dave's case, having the second highest mean center of gravity among these speakers reflects his gender presentation rather than his gender identity.

Intra-Speaker Variation

Explaining the changes that take place in transmasculine speakers' productions of [s] also demands reference to gender role, gender identity, gender expression, and sexuality. Here again we might expect people who want to masculinize their voices to shift toward masculine norms for articulatory behavior as they lower their vocal pitch with testosterone, perhaps through self-conscious manipulation. But this expectation is complicated by the fact that transmasculine people begin their transitions with a wide range of gender identities and expressions, and by the fact that multiple patterns of change arise. Importantly, self-conscious masculinization clashes with discourses within many transmasculine communities that highly value authenticity (the focus of Zimman, under review). In some quarters, there is even a stigma against self-conscious masculinization in behavior and speech both because it suggests insufficient 'natural' masculinity and because the goal of transition should be the desire to express one's authentic self. Of course, such a stance is made possible by the dramatic effects of testosterone and other medical interventions that allow trans men to be read as male. So, although it is possible that some participants are choosing to use more masculine phonetic styles over time, there are other possibilities as well. Due to space constraints I will only briefly discuss them here.

One important point is that socialization is an ongoing process that continues beyond childhood. As transmasculine people move through the world and begin to be perceived as men—that is, to occupy a male gender role—a new set of pressures is exerted that demands certain performances of masculinity. Despite the pride taken in being one's authentic self among members of this community, it is hard to imagine transmasculine people universally resisting the pull of hegemonic masculinity—particularly given the vulnerable nature of their recognition as masculine and/or men. For those who are androgynous in appearance, taking on more normatively masculine characteristics can help ensure that they are perceived the way they wish. Or it may simply be a way to protect against the dangers that are visited upon insufficiently masculine men, of which my participants were clearly aware.

Of course, a change in how a person presents themselves is not necessarily (or only) a response to compulsory gender normativity. Several of my participants underwent significant changes in gender identity or presentation over the course of their first year on testosterone—some are still working to figure out just where they fit. Devin clearly shifted from a more mixed, visibly genderqueer gender presentation to a more conventionally masculine style (for instance, trading his longer, slightly punk hairstyle for a very short buzzed cut). Kyle, though he shifted between and blended normative and non-normative masculinities, had essentially abandoned his genderqueer identity in favor of the label *trans man* by the end of the project. Elvis described himself as “playing with gender” when we first met, and was unsure about whether he wanted to continue taking testosterone for the

first several months he was on the hormone. A year later, he had settled on a more consistently masculine presentation and was confident that testosterone was right for him. The fact that downward shifts in [s] were somewhat more chaotic and less linear than changes in pitch suggests that variation in [s] may be more sensitive to day-to-day fluctuations in affective state, embodied experience, or desired personae, or that it otherwise serves as a more flexible index of gender than does pitch. A question for future analysis, then, is what is happening during recordings like the one made of Devin at 37 weeks on testosterone that lead him to produce [s] with a higher center of gravity than on any other occasion.

For most of these speakers, the changes in [s] took the form of masculinization, but the most interesting case may be Carl's upward shift in center of gravity. Even this unexpected finding can be explained in terms of a shift in gender presentation. Carl, a 21-year-old queer, middle-class Filipino trans man who finished his undergraduate studies at a Bay Area university during my fieldwork, was among many trans men who have described how being perceived as men made them more comfortable expressing femininity. Specifically, I was told on numerous occasions that once an individual is accepted as male by others, he need no longer worry that any hint of femininity might undermine that recognition. Toward the end of my fieldwork, Carl had started growing out his hair and was wearing a wider range of clothing styles—cut-off capri pants stopping just below the knee, for example—than the more conventional jeans and T-shirt look he preferred when we first met. His pitch, too, rose in our last few recordings from its lowest point to a mean that was not much lower than the first recording we made (160 Hz as compared to 167 Hz, respectively). Instead of looking like a gender-normative (if somewhat nerdy) teenage boy, Carl began looking more like a queer, rather bohemian young man who is unconcerned with hegemonic stylistic norms.

CONCLUSIONS

Are any of the masculinities I have discussed in this chapter new or unique? Perhaps so, perhaps not. But the path through which they are acquired is clearly unconventional: these are masculinities that carry the traces of a female gender assignment, of a varied history of gender presentations, and of self-defined identities that may or may not align with presentation. This chapter has provided linguistic evidence for the salience of this framework of gender as multifaceted among transmasculine speakers. As we move to consider a wider range of gendered subjectivities, however, we can see how gender assignment, role, presentation, and identity help us understand the fluid, interlocking, ever-moving parts that constitute gender as a social system.

By focusing on transmasculinities and transmasculine voices, this chapter has also added to our understanding of the boundaries and diversity that

characterize masculinity. We have seen through these speakers how masculinity can stake its claim in any one of several domains—gender assignment, role, presentation, or identity. When we recognize the ways that these elements of gender can be dislocated from each other and rearranged, fem masculinities become intelligible and a wider range of subjects can be included within our notions of the masculine.

ACKNOWLEDGEMENTS

Thanks to my research participants and the many transmasculine individuals who spoke with me during my fieldwork. Thanks also to Kira Hall and my other colleagues and mentors including, alphabetically, Penny Eckert, Roey Gafter, Kate Geenberg, Rebecca Greene, John Rickford, Rebecca Scarborough, Tyler Schnobelen, and Rebecca Starr; to two anonymous reviewers of this chapter; and to audience members at NWA 40. Finally, thanks to the Wenner-Gren Foundation for funding the research discussed in this chapter.

NOTES

1. It is worth noting that, like virtually every other term used to refer to people included under the rubric of ‘transgender’ (Valentine 2007), *transmasculine* is a contested term. I employ it in this space because it is the only identity label that was acceptable to all of the participants in the research under discussion here, and because of its usefulness as an umbrella term. However, some trans community members raise objections: first, that the term suggests there is something inherently similar about trans-masculinities that makes them separate from non-transmasculinities. Many conventionally masculine trans men, for instance, feel that they have more in common with non-trans men than with self-described genderqueer individuals who see themselves as neither female nor male. Second, *transmasculine* implies that all female-to-male trans people see themselves primarily as masculine, rather than feminine; this was a problem suggested by Dave, a fem trans man discussed at length in this chapter (though not enough of a problem to keep him from using the word *transmasculine* in at least some contexts).
2. *Cis*, the Latin antonym of *trans*, is used in many trans communities to refer to non-trans people.
3. Lest one suspect that such differences are driven by biological differences between speaker populations, Ohara (2001) demonstrates that English-Japanese bilinguals treat pitch as a resource for managing their gendered identities as they shift between the languages.
4. Five speakers moved away from the Bay Area during the duration of their participation. Jeff and Joe (see Table 10.1) moved to Portland for better economic situations, Kam moved to Washington for graduate school, and Jordan moved back home to New York state. Elvis also decided to pull up his roots and travel for the better part of a year, and James relocated to Massachusetts for a graduate school program, but I was able to record both of these participants following their return to the Bay Area.

5. However, it has usually been peak frequency or spectral skew, rather than center of gravity, that has been linked to gay-sounding male voices.
6. Interestingly, Jordan's productions of [s] put him between the group of queer trans men and the group of non-binary-identified individuals that includes Elvis, James, Pol, Kam, and Devin. This neatly reflects the fact that I was only able to record Jordan twice, at the very start of his transition, during a time that he said he was gradually shifting away from a genderqueer identity and toward identification as a trans man.

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