

**Gendered gestures:  
An experimental approach to the linguistic embodiment of  
masculinities**

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**1 Abstract**

We pursue an experimental design for research into hegemonic masculinity in the area of gesture-in-communication, demonstrating the influence of gender ideology on gesture. Although gesturers generally accommodate to other gesturers, we hypothesize that gender ideology can interfere with such accommodation. To test this hypothesis, we conducted a matched-guise experiment in which participants were assigned stimuli equal in all regards except gender performance. We took quantitative measures of gesture and computed their change from baseline to experimental task. Although we found significant results, we also did not confirm our hypothesis, and our results resist easy interpretation at this point due to experimental sampling procedures that cut across local contexts of gender meaning. We conclude by proposing an experimental design in which sampling is conducted within populations relevant to gender socialization: communities of practice.

**2 Introduction**

Towards an understanding of interrelationships between gender identity and gesture performance, we pursue an experimental regimen exploring the intersection of hegemonic masculinity and gesture performance. Research into hegemonic masculinities, first launched by Connell (1987), typically assumes hegemonic masculinity (henceforth HM) to be *the* most dominant, or normative, ideal masculinity. However, we prefer Comaroff & Comaroff's (1991, 1997) notion of *hegemonic ideologies*. Hegemonic ideologies are naturalized, universalized and invisible: a hegemonic ideology is one that appears to transcend history by presenting itself as constant across all contexts. Under this definition,

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hegemonic masculinity is situationally variable. Both the context and the participants (according to their values, beliefs, and ideologies) will shape what is presumed to be universal, or hegemonic, at a given site.

We will use the label “HM performance” to refer to a performance which, relative to other gender performances in a given context, is reflective of the HM ideology. Thus, a HM performance:

- (1) enables audiences to quickly, automatically classify its performer as male;
- (2) is invisible as a *performance*, so that the performer’s gender is *natural*; and
- (3) is invisible as *gender*, i.e., tends not to be read as abnormal or incongruent.

In other words, a HM performance succeeds in indexing its performer as masculine without drawing attention to its own performedness. Few researchers have discussed HM in relation to gesture. Among them, Adler, Kless & Adler (1992) describe low gesture as characteristic of HM performance. Building on this link between HM performance and gesture, we are exploring the relationship between the two as situational, ideological, and emergent.

Previous research on gesture performance provides insight into how these relationships may emerge in a particular context, in the well-established domain of accommodation, or entrainment. Agents accommodate to one another's speech, posture and gesture automatically in the course of interaction (Nagaoka, Komori & Yoshikawa, 2007), but Komori, Maeda & Nagaoka (2007) have associated “negative interactions” with the absence of accommodation in a study wherein psychological professionals evaluated footage of therapy sessions. Crucially, behavioral streams can entrain to phenomena not perceptually present. Shockley, Santana & Fowler (2003) have demonstrated entrainment of postural sway in agents who cannot see one another; and Dijksterhuis & van Knippenberg (1998) have shown that the priming stereotypes, such as *hooligan* or *professor*, affects performance on knowledge-related tasks, despite the absence of specifically knowledge-related primes.

Since HM performances are *naturalized*, *congruent* and *easy to classify*, it stands to reason that non-HM performances, relative to HM performances, may be seen as *unnatural*, *incongruent* and *difficult to classify*. Given that incongruence, unnaturalness and difficulty slow down automatic processing<sup>1</sup>, we set out to investigate how a non-HM performance interferes with accommodation.

Deriving from the implications of Shockley et al. (2003) and Dijksterhuis & van Knippenberg (1998) regarding accommodation to stereotypes, we hypothesized that people “accommodate” to stereotypical gestures associated with gendered primes. Specific predictions of this hypothesis include the following:

- (4) (In line with Adler et al., 1992) accommodation to a non-HM stimulus will involve more—and accommodation to an HM stimulus less—gesture.

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<sup>1</sup> This claim has been the premise and/or conclusion of much research in psychology, pragmatics and cognition. We offer the following works as a limited sample: Hoosain (1974); Fischler & Bloom (1979, 1980); Ehrlich & Rayner (1981); Schuberth, Spoehr & Lane (1981); Stanovich & West (1981, 1983); Foss (1982); Balota, Pollatsek & Rayner (1985); and Sperber & Wilson (1995).

- (5) HM stimulus being more congruent with the experimental context, it is a weaker target for accommodation, resulting in a weaker effect.
- (6) However, experimental *participants* with HM behavior or ideation will have a “negative interaction” with non-HM stimulus and fail to accommodate.

### 3 Method

#### 3.1 Apparatus and Measures

Our lab facility, the University of Arizona Evolutionary and Biomechanics Lab, is equipped with six Vicon infrared cameras, which interpret as points in 3D space, at 100 frames/second, the signal from reflective globes (markers) affixed to participants with toupée tape. For our trials, we arranged the motion cameras in a semi-circle oriented towards the location where participants were to stand, in the center of the semi-circle. We affixed markers to participants’ 5<sup>th</sup> metacarpals, wrists, elbows, shoulders, and sternum. We collected video data with a Canon 3CCD camera, placed in front of the participant.

Our two quantitative measures reflect gesture features noted only impressionistically in the literature as characteristic of HM performance (see e.g. Adler, et al., 1992): use of space and overall “amount” of gesture. Our *space measure* is the product of twice the standard deviation over each of the three coordinate axes—that is, the 3D space represented by the central 2/3 of the data points on each axis—averaged across both hands. We represented “amount” of gesture by the *log average velocity*<sup>2</sup> of each wrist relative to the sternum.

#### 3.2 Procedure

We recruited, by word of mouth, eight participants from among University of Arizona undergraduates and friends of the second author’s friends. We used a matched-guise design (Lambert, Hodgson, Gardner & Fillenbaum, 1960) in which participants were randomly assigned one of two stimuli which differed in their content with respect to HM. Four were assigned one stimulus, and four the other. Each stimulus was a cooking video performed by the same actor (first author), in the same setting, with the same camera angle, and the same cooking procedure. Gesture in the stimuli was thus controlled by the cooking procedure itself, which kept the actor’s hands “on deck”. The stimuli were rated for gender content by linguistic-anthropology students unacquainted with the actor. Raters measured the actor’s embodiment, phonology, discourse style, and knowledge of cooking on a seven-point scale (0=HM, 6=non-HM). Ratings confirmed that one video was more HM (HM stimulus) than the other (non-HM stimulus).

The procedure began with a single participant entering the lab. Following informed consent, the participant was outfitted with markers as noted above, and then stood in front of the motion cameras. The participant performed three tasks during the experiment:

- (7) *Comfort Task*: Participants described how to make their favorite food.
- (8) *Baseline Task*: Participants described how to cook spaghetti with marinara

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2 We used the log of this statistic because its population is not normally distributed, but rather exponentially distributed, with high density for low velocities and low density for high velocities.

- sauce from scratch.
- (9) *Experimental Task*: Participants viewed the assigned stimulus, and afterward narrated the events from the video in as much detail as possible.

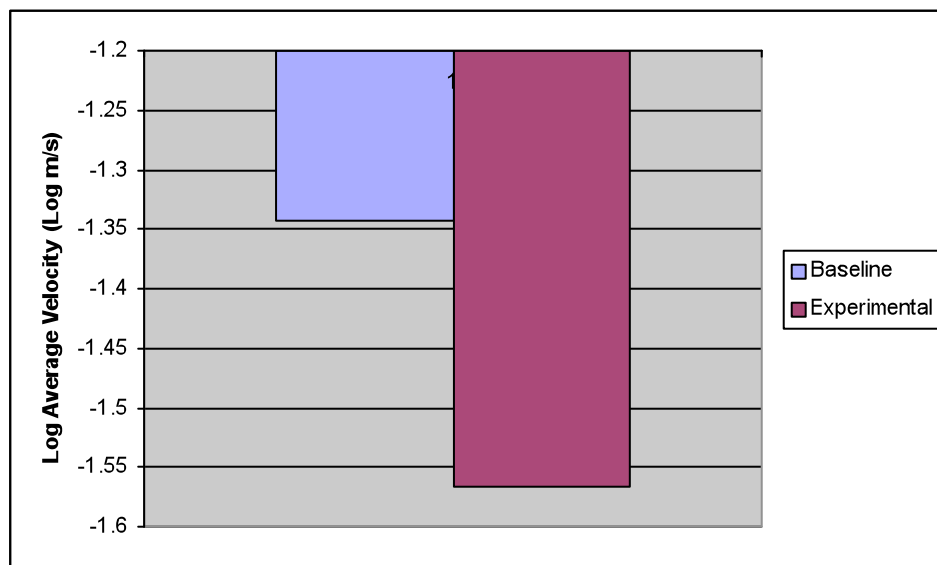
Motion data was collected for both the baseline and the experimental task; video data was collected for all three tasks.

Our measures (see §3.1) were computed in MATLAB from the Vicon motion data. We additionally had linguistic-anthropology students rate the first 30 seconds of each participant's baseline task for gender content, similarly to the stimulus videos, as an inferential clue to participants' individual HM or non-HM practice.

#### 4 Results

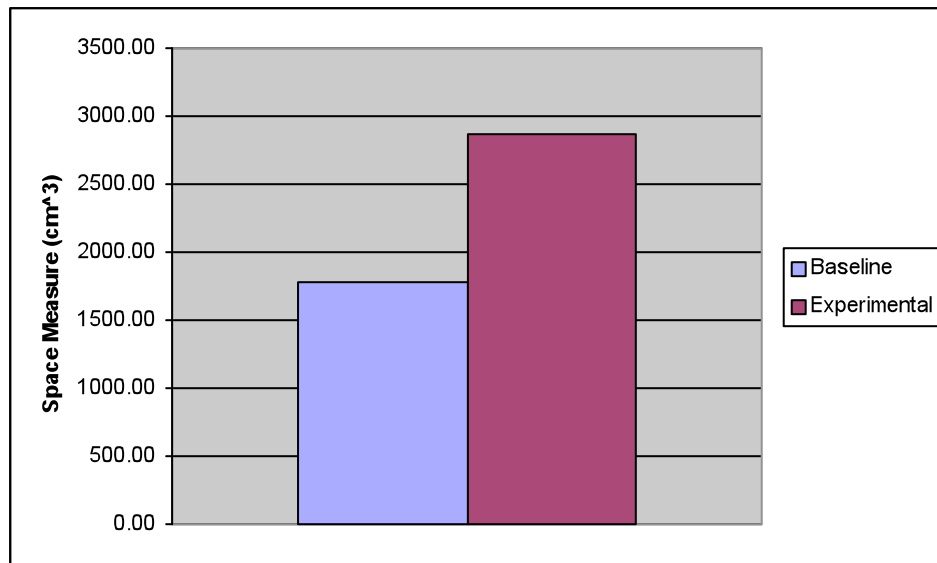
Change in log average velocity from baseline to experimental task was significantly greater ( $p < .05$ ) for the HM than for the non-HM condition. In the non-HM condition, log average velocity decreased by .22, representing a 40.1% decline in velocity ( $p < .0025$ ).

- (10) Log average velocity in baseline and experimental task (non-HM condition)



The space measure, on the other hand, increased by  $1087 \text{ cm}^3$  ( $66.3 \text{ in}^3$ ) from baseline to experimental task in the HM condition, representing an average use of about 4 more in. space on each coordinate axis for each hand.

- (11) Space condition in baseline and experimental task (HM condition)



Thus, we discovered a *decrease* in velocity in the non-HM condition, and an *increase* in the use of space in the HM condition. This leads to the rejection of our hypothesis, which predicted increased gesture for the non-HM, and decreased for the HM, condition. There was no significant interaction between the participant's HM rating and their change in gesture.

## 5 Discussion

### 5.1 Comfort

This surprising finding reveals certain limitations of our experimental design. One effect we did not take into account was Labov's (1972, 1984) observation of general increase in *comfort* of experimental participants and interviewees over the course of tasks. Impressionistically, we were able to note various signs of global rise in comfort for most participants as time progressed, and noted an increase in gesture concomitant with that rise. In particular, the finding of increased use of space in the HM condition is consonant with a comfort effect.

Having failed to control for comfort, we are unable to guess whether its effect is larger or smaller than the effects we sought to measure. If it is larger, it may have dwarfed these other effects to such an extent as to make them unmeasurable given our design. However, if the comfort effect is that large, we must attempt to account for the decrease in gesture in the non-HM condition using comfort as well. To this end, we have several possibilities, which bear investigating:

- (12) *Stigma*. Participants' awareness of the stigmatization of a non-HM stimulus may slow down their processing and reproduction of it. In particular, concern about politically correct representation or about being seen as mocking the stimulus may reduce comfort.
- (13) *Weaknesses inherent in matched-guise design*. Gardner & Lamber (1972)

question whether experimental performance reflects participants' ideologies specific to the *task*, or rather their ideologies about what sort of behavior is appropriate for the *experimental context* itself. As noted earlier, a non-HM stimulus is incongruent with the experimental context, and the necessity of representing it within that context may reduce comfort.

- (14) *Hegemony*. As a non-hegemonic stimulus by definition tends to be read as less congruent, it may also increase processing load, slowing down performance (see Footnote 1).

## 5.2 Consciousness of Prime

Two participants were removed from statistical analysis on the grounds that they demonstrated consciousness of prime, displaying overt, metapragmatic commentary on their respective stimuli. Since accommodation proceeds automatically absent inhibiting factors such as consciousness of prime (Dijksterhuis & van Knippenberg, 1998), consciousness of prime is regularly invoked in removing data points from samples. However, these two participants' performance is instructive in reviewing our hypothesis and design, and in charting the direction of future research, and therefore we will consider each of them individually.

Participant 5, whose baseline task was rated the most HM of all participants, began his metapragmatic commentary by telling the experimenter upon viewing the non-HM stimulus, "All I'm gonna do is make fun of this guy." Hereupon he adopted a stylized persona via such mechanisms as a shift to a Southern-sounding phonology, the use of 1<sup>st</sup>-person pronouns in his narration of the cooking procedure, and the use of angular wrist movements indexical of homosexual males. This performance is an example of mocking, which for Chun (2004, 2007) is a double-voicing process (Bakhtin 1981, 1984) that simultaneously voices the mocker and mockee and produces a distance between the two voices, devaluing the mocked persona. Participant 5 was the only participant in the non-HM condition with an increase in gesture from baseline to experimental task.

Participant 2, on the other hand, was a woman whose baseline task was rated the most HM of the four women participants. She did not overtly announce a metapragmatic intention, but provided ample critique of the value of the HM stimulus as a cooking video, commenting that the performer appeared not to cook very often, looked odd in the kitchen, and went through his procedure in "painstaking detail". She created a distance between herself and the performer by referring to him with the formal-register item "gentleman". She also displayed avoidant behavior, deliberating over words and pausing often in her narration. When the experimenter told her to take as long as she wanted, she replied, "Or as short as I want." Participant 2 was the only participant in the HM condition with a decrease in gesture.

As in §5.1, stigma figures centrally in our tentative explanation of these performances. Participant 5's mocking performance is a creative deployment of stigma, and a case of precisely the "negative interaction" we had in mind in our hypothesis. Unlike the other seven participants, participant 5 paid little attention to the experimental context as a frame for appropriate behavior: he answered his phone twice during his interaction with experimenter and colleagues, and claimed that his participation was a "favor" for the experimenter. This "ownership" behavior is consonant with the extremely HM rating of his baseline task. Participant 2, on the other hand, has a different relationship with stigma.

Her relatively HM rating points to a heavily stigmatized “female masculinity”<sup>3</sup> (cf. Halberstam, 1998; Hoyt, 2005; Schippers, 2007). Assuming that participant 2 has experience with the stigmatization of her behavior, it is possible that she recognizes in the HM stimulus a *source* rather than a *target* of stigma, and rejects it as such. Nonetheless, consonant with discourse seen as appropriate to the experimental context, she politely refers to the objective content of the stimulus—displayed lack of cooking skill—rather than its gender association. Participant 2, thus, instructs us that the hegemonic is not always the unmarked; while participant 5 instructs us that a “negative interaction” may just as easily lead to overt accommodation for the purpose of mocking as to an inhibition of otherwise automatic accommodation.

### 5.3 Future Research

At first blush, our project appears to cast light on the problematic nature of experimental methodology within linguistic anthropology. Our sample cut across many communities of practice relevant to gender socialization, and therefore reflected a population with quite disparate ideologies and practices concerning gender, gesture, and the interaction between the two. Interestingly, the rankings of the baseline tasks of participants 1 and 4, the only pair who shared a community of practice, contained similar comments, in which the words *cool* and *dude* figured prominently. Although raters picked up on shared features for which they had similar gendered associations (*dude*), without ethnographic work into the community of practice it is difficult to assess whether or not these features are relevant to the participants’ gender performances in particular, or if they are markers of affiliation with that community of practice that do not figure into gender identity in a local context.

We believe that experimentation can provide valuable insight to an anthropological understanding of relationships between the ideal realm (values, norms, meanings, ideologies) and measurable behavior. However, the sampling of participants and raters, as well as the gender categories and behavioral effects referred to in the experimental design, should reflect local categories and practices, as we have argued elsewhere (Labotka & Gordon, 2009). Communities of practice likely relevant to gender socialization may include fraternities, queer groups, anarchists, physics nerds, country club members, and any number of others; and it may be desirable to impose limits on the age range of experimental participants in the future. We are presently exploring an ethnographic continuation of this project with the Tucson chapter of a national social fraternity, and with the Tucson chapter of a loosely organized national food-reclamation movement. We hope that the results of these next steps will prove to be a valuable interface between bodies of work on gender and gesture both in anthropology and in the traditionally experimental social sciences, which have hitherto failed to inform one another.

## 6 Conclusion

Although the non-HM stimulus was less congruent, as predicted by our hypothesis, our original predictions were too simplistic. Incongruence can lead to different effects, including slowing down, discomfort and overt metapragmatic strategies. Further, participants bring with them differential conceptions of the roles of context-appropriateness, respect, stigma, and hegemonic masculinity itself. Thus, although the

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Keep in mind that femininity is stigmatized, too!

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effects of the hegemony are observable for most participants (who display more comfort in the HM than the non-HM condition), these cannot explain the overt strategies of P2 and P5. Both participants orient to the hegemonic differently—P2 by rejecting it, P5 by producing it implicitly—challenging the assumption of a single dominant, universal or invisible hegemonic masculinity that cuts across all contexts.

If hegemonic masculinities are situationally variable, as we have argued, than an experimental design failing to take into account gender socialization—a locus of this variability—will lead to an erasure of the unstatic nature of the hegemonic. Cutting across local variation leads to classifying outlying performances as anomalous, though they may not be anomalous at all in-context. P2 and P5 do not present us with unexplainable abnormality, but rather with performances that shed light onto the variability of the hegemony, the differential values assigned to it, and the various approaches one may take in interacting with it.

We hope that by sampling within specific communities of practice, and orienting to the gender ideologies relevant to that community, we can reveal significant interactions between gendered performances, gesture and accommodation.

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