

Current norms and best practices for collecting and representing sex/gender in linguistics: Towards ethical and inclusive methodologies

Cooper Bedin (they/them), Montreal Benesch (they/them), Marina Zhukova (she/her) & Lal
Zimman (he/they)*

Abstract. Amid changing ideas about sex and gender, there is a growing need to reexamine norms around their operationalization and theorization. This talk presents results from a survey exploring linguists' practices for collecting information about research participants' sex/gender. Based on 157 complete responses to date, we explore the popularity of different methods for gathering information about sex/gender and the methodological and theoretical implications of those choices. We closely analyze the way questions around sex/gender are formulated and differences among linguists by subfield, training, identities, and gender politics, and offer best practices for ethical and inclusive approaches.

Keywords. sex/gender; data collection; methodology; human subjects research; data management; sociology of linguistics

1. Introduction. Sex and gender are recognized as important variables in many areas of linguistic research. As a result, identifying and categorizing human subjects participants based on their sex/gender is commonplace in the field.¹ However, there are problems with common practices used to categorize language users in this way:

1. There are no standardized guidelines or best practices regarding how sex/gender should be asked about or operationalized for analysis;
2. Researchers rarely explicitly report how they gathered information about sex/gender;
3. Gender-affirming approaches can present challenges because they may not work equally well for all communities and, in some cases, may run contrary to established norms.

Furthermore, the survey results we discuss in this paper also indicate that linguists' satisfaction with their own methods is low, with only 5% of respondents indicating that they were completely satisfied with their approach. This paper is part of a larger project on current approaches and best practices for dealing with sex/gender in linguistics. Here, we focus on current practices as reported by 157 linguists who completed an anonymous online survey on this subject.

Methodological choices about how to gather and analyze information about sex/gender require a theoretical foundation to be properly motivated. Yet many central questions about sex/gender remain unanswered: What are the mechanisms through which sex/gender impact language use? How many sexes/genders should be recognized in linguistic research? What do linguists mean when describing a person, body, or voice as female, male, or as belonging to another category? And what *are* sex and gender – from a linguistic perspective – to begin with?

Social scientific understandings of sex/gender often fall into the widespread “coat rack model” (Nicholson 1994), which treats gender as a culturally-specific social construct and sex as

* Authors: Cooper Bedin, they/them, University of California Santa Barbara (UCSB) (cbedin@ucsb.edu), Montreal Benesch, they/them, independent scholar (montrealbenesch@gmail.com), Marina Zhukova, she/her, UCSB (mzhukova@ucsb.edu), & Lal Zimman, he/they, UCSB (zimman@ucsb.edu).

¹ We use the compound form *sex/gender* in recognition of the varied language for and conceptualization of these phenomena within linguistic research.

a universal biological reality. This is an improvement over attending only to sex, or treating the two concepts as interchangeable, but it misses the critical fact that biological sex, too, is a social construction (Butler 1993; Dauphinais Civitello 2022; Zimman 2014; Snorton 2017). That is, over time and across cultures, one can find differences in the categories of bodies that are recognized, the boundaries between those categories, and the embodied traits considered necessary to categorize any given body. Bodies are also materially impacted by gendered social practices like hair removal, exercise, food consumption, cosmetic surgery, and certain medications.

The lack of explicit theorization of sex and gender in linguistics is exacerbated by inconsistencies and vagueness in how and why these concepts are used. When researchers report on participants' sex/gender in articles and presentations, it is rare for them to explain what participants were asked or whether other tactics were used, like categorizing participants' genders based on visual and/or auditory cues. Furthermore, at times sex serves as a proxy for specific bodily characteristics that are non-categorical, such as vocal tract length or laryngeal size.

In this paper, we present the results of a survey focused on how linguists collect information about participants' sex/gender, the language they use when talking about participants' sex/gender, and their experiences with these questions in their training and teaching practices. We analyze survey responses across subfields, gender identities, and politics. We also discuss the benefits and drawbacks associated with some of the practices reported on by survey takers, and we close with recommended best practices based on the analysis presented here, as well as other prongs of our project on operationalizing sex/gender in linguistics.

2. Methods. We conducted an online survey to assess linguists' self-reported practices related to collecting, modeling, and reporting data on sex/gender. The survey included quantitative and qualitative items across five areas: linguistics background, past and current approaches to asking about gender, choice of terminology, satisfaction with the current methodology used, and demographics. Respondents were recruited through social media and mailing lists for linguists, resulting in a final sample of 157 eligible respondents.

2.1. SURVEY DESIGN. The survey was designed as a voluntary 15-20 minute questionnaire hosted on Qualtrics.² Eligibility criteria required that respondents be at least 18 years old and hold or be working towards a graduate degree in linguistics. Survey questions aimed to elicit data from a range of researcher perspectives across subfields. The survey was structured into five blocks, each with a range of question types:

- Block 1 - Linguistics Background. This block included questions on the years, location, and language of respondents' graduate training, their current employment status, and their primary research area(s) in linguistics, the languages they study, and methods for data collection, including whether human subjects are involved;
- Block 2 - Sex/Gender Methods. This block included questions about respondents' methods for collecting sex/gender data, the specific wording used, the other identities they gather, and the pronouns they use for participants in publications and presentations.

² The full list of survey questions can be found in our supplementary material: <http://lalzimman.org/PDFs/LSA2024-SupplementaryMaterial.pdf>

- Block 3 - Terminology. Respondents were asked about their use of *sex* versus *gender* terminology and the motivations for their choices, as well as relevant academic training they have received as students or provided as teachers;
- Block 4 - Satisfaction. This block consisted of two questions to identify respondents' satisfaction levels with their current approaches to sex/gender and how their methodology would be different under ideal circumstances;
- Block 5 - Demographics. In the final block, we asked (mostly open-ended) questions on each respondent's age, country of origin, gender identity, trans and intersex status, sexuality, race/ethnicity, disability status, and attitudes towards gender diversity.

2.2. RESPONDENTS. Respondents were recruited by posting calls for participants on LINGUIST List and Twitter. We also reached out to the department chairs of the linguistic departments from the LSA's directory of linguistics programs, and asked them to share the survey with department members. The responses were collected between May and July of 2023. 259 linguists answered at least some portion of the survey. We excluded respondents who did not meet eligibility requirements, did not complete the survey, or reported not conducting human subjects research. This left 157 responses for further analysis. Respondents covered a range of linguistic subfields, with the greatest representation from sociolinguists, psycholinguists, phoneticians, and syntacticians. They collectively work with more than 100 languages, but with a bias toward English and, to a lesser degree, Spanish, Italian, French, Russian, Japanese, Korean, German, and Mandarin. Most respondents (61%) received their graduate training in the United States, with 7% from the UK, 6% from Canada, 4% from Germany, 4% from Australia, and 18% from other countries, most of them in the Global North.

The distribution of respondents' gender, trans & intersex status, sexuality, and race/ethnicity are presented in Table 1. To gather respondents' genders, we asked the open-ended question, "How would you describe your gender?" Twenty-seven percent were coded as masc based on identification with (only) masculine terms (e.g., *man*, *male*, *guy*, *transmasc*), 52% were coded as femme based on identification with (only) feminine terms (e.g., *woman*, *female*, *femme*, *transfemme*), 18% were coded as 'both/neither' based on identification with terms like non-binary, genderqueer, genderfluid or with both masc and femme terms, 2% did not give an answer (NA), and <1% selected 'other' and wrote in a response we were unable to classify within our coding scheme. To ask respondents' trans status, we asked, "Would you describe yourself as trans, non-binary, genderqueer, or another gender different from the one assigned to you at birth?" Sixty-eight percent were coded as cisgender based on answering "No"; 20% were coded as trans/non-binary based on answering "Yes"; 7% were coded as questioning/unsure, and 4% did not answer this question (NA). We also asked for information about intersex status with the question "Would you describe yourself as intersex?" and have integrated the 1% of respondents who said "Yes" to this question in Table 1, even though intersex and trans status are orthogonal. To ask respondents' sexuality, we asked the open-ended question, "How would you describe your sexuality?" Thirty-three percent were coded as straight based on identification as straight or heterosexual, 56% were coded as queer based on identification with any other sexuality, including asexuality, 10% did not give an answer (NA), and 1% chose 'other.'

To ask respondents' race/ethnicity, we asked the open-ended question, "How would you describe your race/ethnicity?" Sixty-nine percent of respondents were coded as 'White' based on self-identification as only white, Caucasian, or with specific European ethnicities. Reflecting hegemonic logics of race/ethnicity, people who identified as both white and another category were counted as mixed, as well as members of the racialized category they named (e.g., someone

who said they were white and Vietnamese would be coded as ‘Mixed’ and ‘Asian/Asian American’). Respondents were coded as ‘Asian/Asian American’ if they self-described as East Asian, Southeast Asian, or South Asian, with specific ethnic or ethno-national labels associated with those regions, or as Asian American with ancestry in those regions. Five percent of respondents were coded as ‘Latinx’ based on self-identification as Latinx/a/o, Hispanic, or with a specific part of Latin America. Two percent of respondents were coded as ‘SWANA’ (Southwest Asian and North African), which included people who identified as Arab, Middle Eastern, or with a specific ethnicity or nationality associated with that region (e.g., Turkish). One percent of respondents were coded as ‘Indigenous’ based on identifying with that term or a specific Indigenous group (e.g., Māori). One percent of respondents were coded as ‘Black’ based on identifying with that term and/or as African American. Eight percent of respondents did not report their race/ethnicity. Ten percent either identified as mixed, or named more than one of the groups described above.

Gender	Trans & intersex status	Sexuality	Race/ethnicity
Masc: 27.39%	Cis: 68.15%	Straight: 33.12%	White: 69.43%
Femme: 52.23%	Trans: 19.75%	Queer: 56.05%	Asian: 10.19%
Both/neither: 17.83%	Unsure: 7.01%	Other: 0.64%	Latinx: 5.10%
Other: 0.64%	Intersex: 0.64%	NA: 10.19%	SWANA: 1.91%
NA: 1.91%	NA: 4.46%		Indigenous: 1.27%
			Black: 1.27%
			Mixed: 10%
			NA 7.64%

Table 1. Respondent demographics: gender, trans & intersex status, sexuality, race/ethnicity

The distribution of respondents’ age, degree status, and disability status are presented in Table 2. Age was determined based on respondents’ reported year of birth, with the mean age being 35 and the median age being 33. For education status, we used the eligibility screening question, “Do you have or are you working toward a graduate/post-Bachelor's degree in linguistics?” Forty-seven percent of respondents were current students, and 53% already graduated. We also asked the open-response question: “Do you have a disability? If you are comfortable disclosing, what type of disability do you have?” We coded responses that contained “No” as ‘Able’, responses that contained “Yes” or named a specific disability as ‘Disabled’, blank answers as ‘NA’, and responses that we were unable to classify within this coding scheme as ‘Other.’

Age	Degree status	Disability status
Mean: 35	Students: 47.13%	Disabled: 21.02%
Median: 33	Graduated: 52.87%	Able: 55.41%
NA: 2.55%		Other: 3.18%
		NA: 20.38%

Table 2. Respondent demographics: age, degree status, disability status

3. Results. We present findings in four different areas: how survey respondents reported collecting sex/gender information from research participants (§3.1), terminological choices respondents make with respect to the words *sex* and *gender* in their work (§3.2), how

respondents reported sex/gender being discussed (if at all) in their own academic training (§3.3), and how reported approaching sex/gender in the training they provide their students (§3.4).

We examine survey responses in aggregate and with respect to sociopolitical positionalities and beliefs of the respondents. For the purposes of this paper, the two main positionalities we examine quantitatively are whether respondents self-identify as trans, and which linguistic subfield respondents identify as being part of. The former is relevant because trans linguists' personal experiences with sex and gender may inform their research practices when working with human subjects. The latter is relevant because there may be systematic differences in how linguistic subfields approach sex and gender.

Trans status was determined based on a select-all-that-apply question which asked “Would you describe yourself as trans, non-binary, genderqueer, or another gender different from the one assigned to you at birth?” Although respondents could select multiple options, we found that almost all respondents exclusively selected either ‘Yes,’ indicating they are trans (n=31, 20% of total responses), or ‘No,’ indicating they are not trans (n=107, 68%). The respondents who did not select either of these options were analyzed as a third group (n=11, 7%). Linguistic subfield was coded manually, based on the question “What is/are your primary research area(s) in linguistics?” We found that the most well-represented subfields amongst the respondents were phonetics (n=39, 25% of total responses), psycholinguistics (n=37, 24%), sociolinguistics (n=56, 36%), and syntax (n=23, 15%), and thus included these subfields in our quantitative analysis. Respondents who identified with multiple subfields were coded as a member of each one.

Sociopolitical beliefs were examined based on a select-all-that-apply question which asked respondents to click on statements about sex/gender that they agree with. These included statements such as “I believe gender is a matter of self-identification unrelated to physical characteristics,” “I believe there are more than two genders,” or “I believe there are only two genders.” For the purposes of this paper, we zero in on whether respondents selected “I believe there are more than two genders” (n=98, 62% of total responses), “I believe there are only two genders” (n=4, 3%), or neither of these (n=55, 35%), because we expect that beliefs about whether gender is binary likely impact research practice. We also examine this question because the significant imbalance in responses raises the potential for sampling bias to have impacted our results: a survey of the kind we distributed would be more likely to attract researchers who are invested in aligning their practices with modern ideas about gender, which would lead to more traditional ideas being under-represented in our responses.

3.1. METHODS FOR ASKING. The first main component of the survey sought to determine how—in a practical sense—respondents ask research participants about their sex and/or gender. Choices about how to collect this information can significantly impact findings (e.g., Becker et al. 2023), yet it is rare for this to be acknowledged.

As Figure 1 shows, the majority of respondents to our survey reported using a written form or survey to collect this information from their participants—among the 157 complete survey responses, 117 (75%) reported using forms or surveys in current and/or past research. The next most common methods were to use metadata from an existing dataset (n=57, 36%), and to simply not ask about sex or gender at all (n=61, 39%). A smaller number of respondents reported either asking verbally (n=32, 20%), or relying on contextual information about their participants such as pronouns used to refer to them by others (n=26, 17%). Across the entire group of respondents, there were not substantial differences in what respondents reported using in past versus current research.

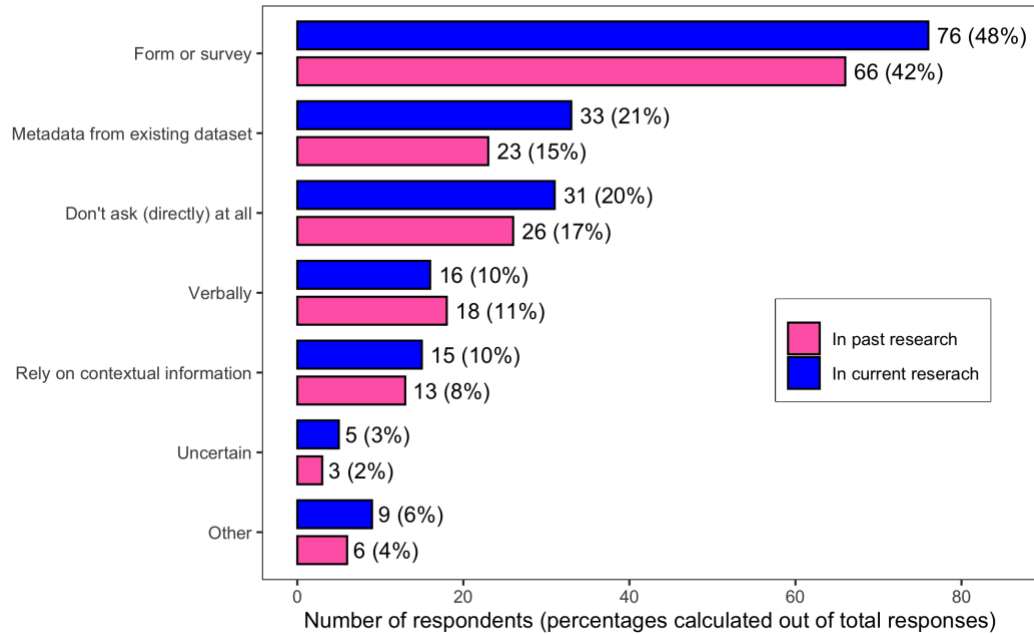


Figure 1. Methods for asking about sex/gender respondents reported using in their research

Given the widespread usage of forms and surveys as a data collection method, we now examine more closely the ways in which these are implemented. Respondents who indicated that they used forms or surveys in their work were directed to a series of follow-up questions regarding their survey design choices. One such crucial decision is the structure of the question. We found that, of the 117 respondents who used forms or surveys, the most widely-used options were to present gender as an open response or text box ($n=83$, 71%), or as a multiple-choice question ($n=71$, 61%). All respondents who answered this question reported using one of these two methods, or a combination of both. Four respondents (3%) reported additionally using linear scales (e.g., masculinity/femininity).

Next, we further zoom in and examine design choices made by the 71 respondents who reported using a multiple-choice question to elicit sex/gender. Respondents who reported using this method were directed to an additional question asking which categories they offer participants, which 60 of these 71 respondents answered. This question was presented as an open text field, and responses were then manually coded according to which categories respondents listed in their answer. The most popular format reported by respondents was to provide four options: ‘male’, ‘female’, ‘nonbinary’, and ‘other’ ($n=23$, 38%), where ‘other’ typically included the ability to write in a custom response. The next most popular choice was to provide three options: ‘male’, ‘female’, and ‘other’ ($n=17$, 28%). Other permutations were: ‘male’ and ‘female’ ($n=6$, 10%); ‘male’, ‘female’, and ‘nonbinary’ ($n=7$, 12%); and ‘male’, ‘female’, ‘nonbinary’, and one or more additional genders such as ‘agender’, ‘genderfluid’, or ‘genderqueer’ ($n=7$, 12%).³

We now examine whether the sociopolitical stances of respondents impact the multiple-choice options they report providing in their own surveys. Figure 2 visualizes differences between trans and non-trans respondents. Trans respondents are shown in pink, non-trans

³ Some respondents ($n=21$, 35%) also reported offering a ‘decline to provide’ option, which we do not include in this analysis. Several respondents reported providing distinct options for ‘cis man/woman’ and ‘trans man/woman’, which for this analysis we coded as equivalent to ‘male’ and ‘female’.

respondents in blue, and those who did not identify as trans or non-trans in gray. For both trans and non-trans respondents, the four-option format (‘male’, ‘female’, ‘nonbinary’, ‘other’) is most popular. The largest differences between trans and cis respondents was that trans respondents were proportionally far more likely to offer additional gender options beyond ‘male’, ‘female’, and ‘nonbinary’ (although this practice was rare in general), and less likely to use a format where the only option beyond ‘male’ and ‘female’ was ‘other’.

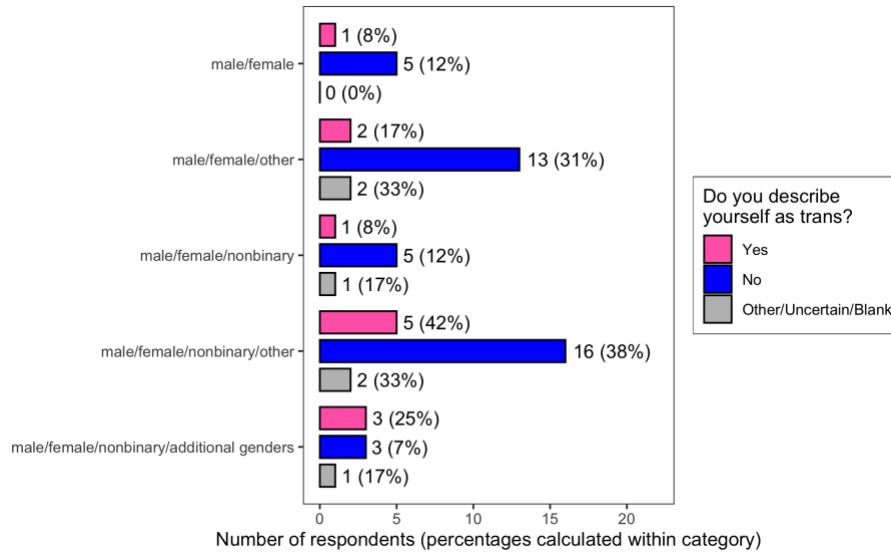


Figure 2. Multiple-choice options respondents report providing, by trans status

Next, we examine whether respondents’ beliefs about binary gender are reflected in the multiple choice options they report providing. Only one respondent who answered this question reported believing that there are only two genders—unsurprisingly, this respondent also reports using only ‘male’ and ‘female’ as multiple-choice options. Surprisingly, however, there are also 5 respondents who report believing that there are more than two genders, but use only ‘male’ and ‘female’ multiple-choice options in their research. This indicates a mismatch for these respondents between beliefs about gender and research practices.

Figure 3 visualizes differences between linguistic subfields in the multiple-choice options respondents report providing. We compare the four most well-represented subfields among respondents (phonetics, psycholinguistics, sociolinguistics, and syntax), and the relative likelihood that members of each subfield would or would not provide ‘nonbinary’, ‘other’, or additional genders as options in a multiple-choice question. As Figure 3 shows, sociolinguists are highly likely to provide a ‘nonbinary’ multiple-choice option, where the other three subfields are closer to a 50/50 split as to whether this option is offered. Linguists in all subfields were overwhelmingly likely to provide an ‘other’ option, with phoneticians leading this norm, and psycholinguists least likely to do so. Linguists of any subfield were unlikely to provide additional genders; however, the group who did is largely composed of syntacticians.

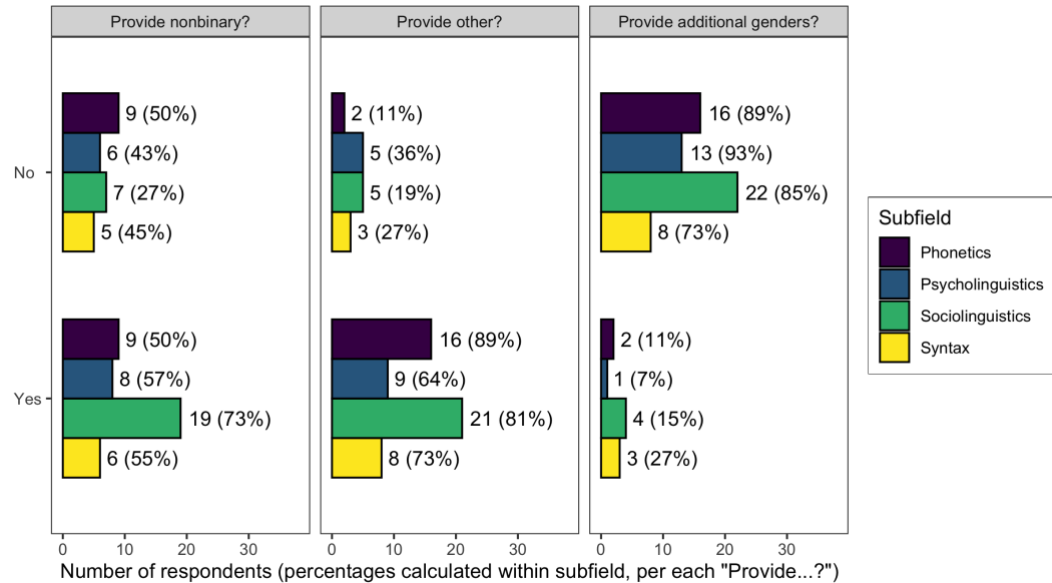


Figure 3. Relative likelihood of providing ‘nonbinary’ (left), ‘other’ (center), or additional genders (right) as multiple choice options, by subfield

These findings illustrate that, while there are differences between subfields, they are not as straightforward as one might expect. What multiple-choice options a researcher provides in a study is a reflection of both what they believe are relevant categories for their research, and what categories they believe their respondents will find acceptable. The choice to include ‘nonbinary’ indicates that a researcher believes whether a person is nonbinary is relevant to their research question and/or that they will have nonbinary respondents, where providing an ‘other’ option more often functions as a catch-all for participants who identify in ways the researcher did not anticipate. This difference has important consequences for the inclusion of trans and nonbinary perspectives in linguistics research—participants who do not see their gender included in a form or survey are forced to either misgender themselves, withhold desired information, or exclude themselves from the project (Vriesendorp & Wilson 2023). Additionally, nonbinary participants are frequently excluded because researchers believe the complexities introduced to quantitative analysis by gender inclusivity are not interpretable, not worth the trouble, or not something that leads to valuable contributions to knowledge. This leads to unreliable and ungeneralizable results, where an entire category of people is systematically excluded and/or misrepresented in research findings across linguistic research.

To summarize, in terms of gathering information about research participants’ sex/gender, survey takers most often report using a written modality. Many use open-ended prompts, but multiple choice questions are also common. When multiple choice is employed, it is common for the researchers who participated in this survey to include ‘other’ and/or ‘nonbinary’ as options. Sociolinguists were the most likely to name ‘nonbinary’ as an option, and trans researchers were the most likely to name specific nonbinary identities like ‘agender’. However, a sizable portion of the researchers surveyed still use less than optimal practices, including not asking directly about gender at all (n=61, 39%) and offering only ‘female’ and ‘male’ in a multiple choice question (n=6, 10% of respondents who reported their multiple-choice options). Importantly, the latter practice is not restricted to people who only **believe in** two genders.

3.2. TERMINOLOGICAL CHOICES. Next, we examine terminological choices respondents report making with respect to the terms *sex* and *gender*. We begin with the results of a select-all-that-apply question asking whether respondents use the terms *sex*, *gender*, or both—either interchangeably or with distinct meanings—in their research.

Figure 4 shows the breakdown of responses to this within our four most well-represented subfields. Across all four subfields, far more respondents reported using the term *gender* than *sex*. Notably, almost all of the sociolinguists report using the term *gender*, and phoneticians were the most likely to report using the word *sex*.

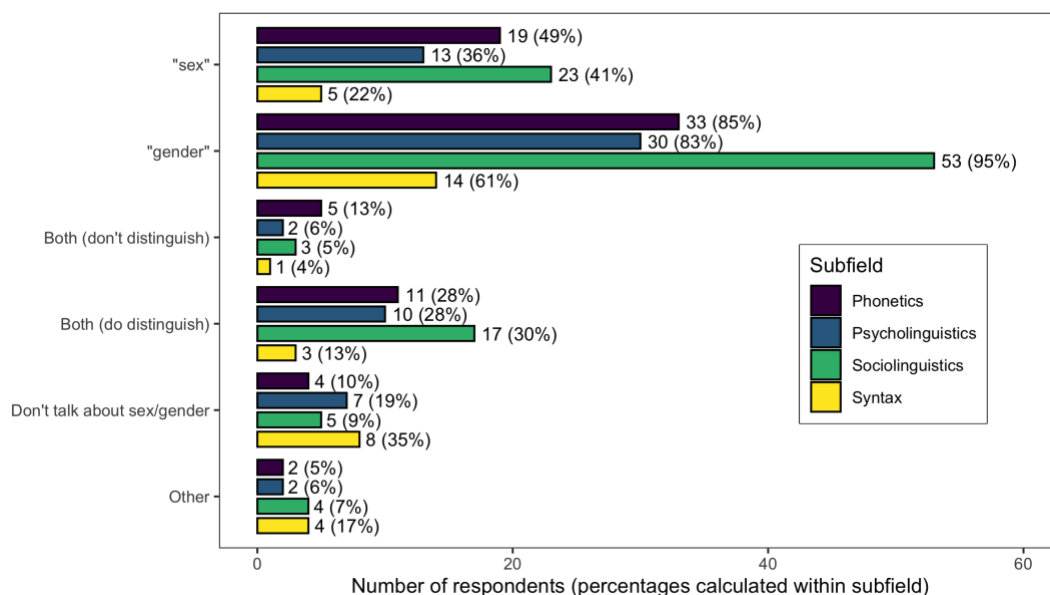


Figure 4. Respondents' terminological choices, by subfield⁴

Several themes emerged from open-ended responses in this block which align with quantitative distinctions across subfields. The most common response characterizing a distinction between *sex* and *gender* involved relying on the coat rack model that considers *sex* to be “biological” and *gender* to be “social.” This led to the tendency to equate differences in body morphology to “*sex*” and differences in social identification to “*gender*,” which is congruous with sociolinguists using *gender* and phoneticians using *sex*. When *sex* is considered biological and *gender* the only social variable, linguists who are primarily interested in social variables (e.g., sociolinguists) will ask about *gender*, and linguists interested in bodily morphology will ask about *sex*. Respondents who work in both subfields are likely to recreate this distinction in their own work, as seen in (1).

- (1) In discussing articulatory phonetic issues where sexual dimorphism comes into play, I use “*sex*”; in other circumstances (including but not limited to identity construction), I use “*gender*.” [40s, male, sociophonetics/phonology/psycholinguistics]⁵

⁴ Figures 4 and 5 reflect the raw answers respondents gave to this question, where a respondent could select any number of items from the list provided. A small number of respondents appear to have interpreted the question in unintended/unclear ways, e.g., 3 respondents reported that they use the word *gender*, but also that they don't talk about *sex/gender* in their research at all.

⁵ We have elected to share respondent characteristics that balance our desire to contextualize responses with the need to protect their identities.

Also notable in Figure 4 is that syntacticians—relative to all other subfields—most frequently reported that they do not talk about either sex or gender in their research at all. As one syntactician said, “sex ... is irrelevant to my studies of syntax” [20s, female adjacent, syntax/experimental syntax]. Echoing the above discussion of sociolinguists and phoneticians, linguists interested in questions of language structure would have no reason to ask about “biology.” While a distinction between sex and gender is an improvement on conflating these characteristics, we return to problems with the coat rack model in our recommendations (§4).

Another important observation in Figure 4 is that only a very small number of respondents (n=8, 5%) reported using *sex* and *gender* interchangeably—most respondents who reported using both terms indicated that they do distinguish the two. This indicates limitations of our survey method—contrary to what you would expect from such results, it is not uncommon to find recent linguistics publications in prominent journals in which *sex* and *gender* are used interchangeably. This could be related to sampling bias, and/or mismatches between reported and actual research practice for some respondents.

Figure 5 then examines respondents’ terminological choices by self-identified trans status. Across both trans and non-trans respondents, respondents most often indicated using *gender*, followed by *sex*, in nearly the same proportions. However, trans respondents were proportionally much more likely to indicate that they use both terms and distinguish between them, and no trans respondents reported using the terms *sex* and *gender* interchangeably. Trans respondents were also least likely to report that they do not talk about sex or gender at all in their research.

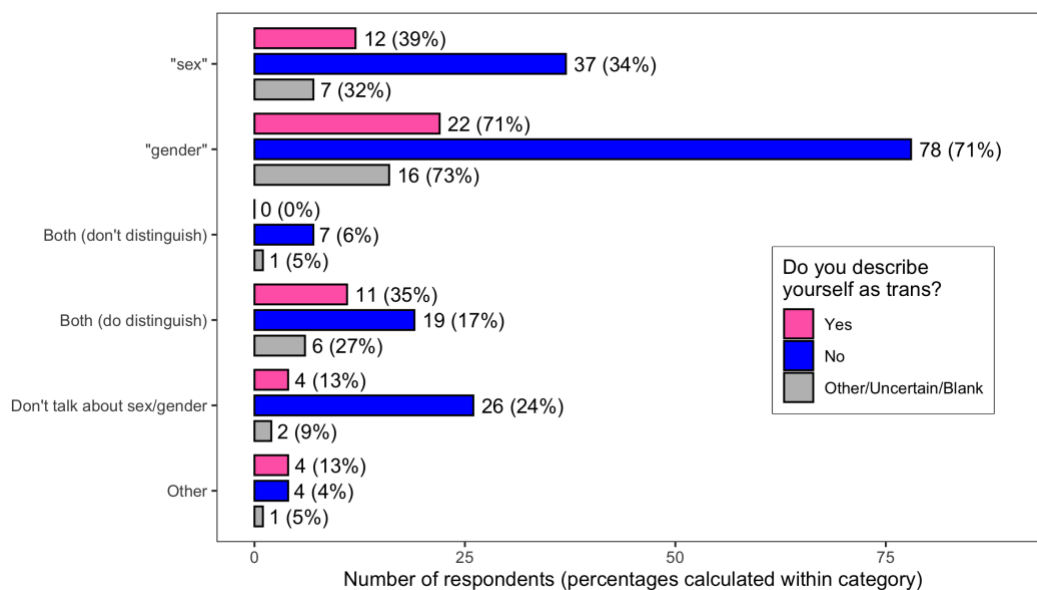


Figure 5. Respondents’ terminological choices, by trans status

In sum, linguists vary in their approaches to the language of *sex* and *gender*. Researchers in different subfields have different terminological tendencies in ways that map onto their general outlook on sex/gender, often using the coat rack model split between sex and gender to decide which term to use. Trans status also seems to affect distinctions of sex from gender, with trans respondents especially reporting consistently distinguishing between sex and gender. Yet, again, sex and gender can never be fully separated. When used to refer to distinct aspects of the self, they should be defined and implemented with care, and without naturalizing any one cultural

model of biological sex. We have a responsibility as social scientists and as people to be mindful when asking our participants sensitive, deeply personal information.

3.3. ACADEMIC TRAINING. Two-thirds of our respondents report receiving no guidance on how to handle sex/gender in research during their training. Some benefit from their lived experiences; as one scholar said, “I’m non-binary so anything they would tell me was years behind what I already knew” [20s, agender, sociolinguistics]. Others benefit from the lived experiences of their friends and colleagues. One scholar mentioned “[trying] to be intentional about having discussions with [her] LGBTQ+ colleagues and friends about the way these questions strike them and ways to better represent gender as a spectrum” [20s, cis-female, sociolinguistics/phonetics].

A few respondents did receive explicit training on sex/gender, but not always in ways that they found workable for their research. A common sentiment was that even classes about gender, such as gender theory courses or linguistics classes on language and gender, did not cover any of the practicalities of how to approach gender in research contexts:

- (2) I took a gender studies course which dealt with sex and gender on a conceptual level, but none of my formal training has specifically dealt with how to treat these concepts in research with human subjects. [30s, woman, discourse analysis/language and gender/language reform]

Even respondents who **were** trained in operationalizing gender did not necessarily learn how to do this humanistically, ethically, or in theoretically-informed ways:

- (3) We were told we should report # of F participants for IRB reasons so we weren’t oversampling M, but there was **no guidance about how to ask or anything like that** [30s, woman, experimental syntax/language contact/typology] (emphasis added)
- (4) I have been told that in speech intelligibility studies that women's voices have higher rates of intelligibility on similar tasks, so women's voices are preferable when doing intelligibility studies. [20s, female, sociolinguistics/phonetics/psycholinguistics]

It’s never too late to improve your research methods.

3.4. PEDAGOGICAL PRACTICE. Although few respondents received satisfactory training, some describe taking conscientious steps toward improving the training of the next generation of linguists when it comes to sex/gender. Some of the responses from these linguists include:

- (5) Some undergrad theses do a lot with gender and we problematize it and I guide from that, otherwise just making sure they ask and it’s not a binary option [30s, trans woman, sociolinguistics]
- (6) I have written guides and delivered workshops on collecting, analysing, and disseminating data relating to sex and gender. These approaches focus on critical reflexivity, ensuring the appropriateness and relevance of social information to specific research contexts/questions, and questioning the usefulness of such data even after collection. [30s, trans woman, discourse analysis/corpus linguistics]
- (7) I help them think through what information they actually need and the best way to get it, as opposed to just reproducing the same demographic form regardless of study or participants. [30s, male and trans, sociolinguistics/discourse analysis/phonetics]

When identifying quotes to share about training practices, we did not intentionally sample comments from trans linguists. What we found, however, was that real actions taken to train

students to approach sex/gender in a nuanced way all came from respondents who identified themselves as trans. These scholars promote the problematization of normative approaches to sex/gender, encourage the adoption of critical and reflexive viewpoints, and attend to the different needs of different students and across different projects. They underscore the ethical dimensions of collecting sex/gender information as well as the possibility of using innovative methods and questioning traditional ones.

4. Conclusion and recommendations. Methods for collecting data about participants' sex/gender vary by factors such as subfield, trans status, and beliefs about gender—though not always in predictable ways. Most linguists do not receive informed guidance on operationalizing or theorizing sex/gender in linguistic research as part of their training. When they do, it can be problematic, and most survey takers were dissatisfied with their training as well as their current methods. However, some describe breaking that cycle and giving their students the tools to approach gender in expansive, affirming, and humanistic ways.

One crucial way to improve our theorizations of sex/gender is to reject the coat rack model, recognizing that sex, like gender, is a socially constructed category. Sex is constructed through the creation and reification of (racialized) binary categories despite the far more complex variation actually found in human bodies. This happens through the material alteration of sexed characteristics—including those designed to erase human sexual diversity, such as intersex bodies—and via the linguistic practices used to characterize gendered bodies. When we consider the realities of sex and gender both being socially constructed, the coat rack model falls apart. It cannot continue to be the basis of linguistic methodologies; instead, methodologies should be updated to reflect updated understandings of sex and gender.

To this end, we offer the following recommendations regarding methods for addressing sex/gender:

1. Collect information in ways that are informed, ethical, direct, transparent, and sensitive to the community of study. Forcing participants into categories they don't identify with is misgendering, which is an unethical practice (e.g., Ananthanarayan et al., 2021). Choices about data collection should also be informed by specific research questions, evidence, and community input. At the same time, researchers should avoid assuming that everyone in their population of study shares the same normative ideas about sex/gender.
2. Use open-ended questions whenever possible. When that is not an option, be sure to provide more than two categories. However, avoid using the word "Other" as a catch-all for everyone outside the binary categories. Ideally, find opportunities to give participants agency in how they are represented and allow emic understandings of identity to emerge.
3. Report how you collect info about and process sex/gender info, along with other relevant demographics. Explore different options for representing participants' identities and new methods for binning & modeling.
4. Treat both *sex* and *gender* with caution. It is important to avoid conflating these concepts, but also to avoid naturalizing the notion of "biological sex" as a binary, asocial phenomenon. Recognize that the sex binary is as constructed as the gender binary. Avoid trying to use sex and gender as a way to figure out whether participants are trans; if this is information you want, ask participants directly in a separate question. Specifically, do not assume that a question about "sex" will necessarily be answered with participants' sex

assignment at birth. Trans people may either understand sex differently or opt not to share that information.

5. Carefully consider any expectations you may have about whether and how sex and/or gender are relevant factors for your analysis, or whether your research participants share your understanding of what information you are requesting. Talking only about sex because a linguistic phenomenon has been associated with bodily difference (e.g., F0) risks missing important findings in the significance of gender identities for linguistic patterning. Additionally, it is important to consider whether sex/gender might be serving as a proxy variable for another factor that correlates with gender.
6. When making these choices, talk to specialists—especially trans specialists—both within and outside of linguistics. Students are often more knowledgeable about gender diversity than faculty are, and it is important to have these conversations with them and keep learning from expert voices—as you are doing right now by reading this paper!

These steps represent current best practices surrounding the operationalization and theorization of sex/gender in inclusive and affirming ways (see Bedin et al. 2024 for more). Ultimately, many foundational assumptions about the relationship between language and identity are in desperate need of robust testing and reexamination. Our recommendations should therefore not be regarded as the final word on the treatment of sex and gender in linguistics, but as a necessary foundation toward continually refining our understanding about the complex relationship between language and the social world.

References

- Ananthanarayan, Sunny, Evan Bradley, Kirby Conrod, Archie Crowley, J Inscoc, Lex Konnelly, & Lal Zimman. 2021. LSA statement against linguistic misgendering. Linguistic Society of America. <https://www.linguisticsociety.org/content/lsa-statement-against-linguistic-misgendering>.
- Barron-Lutzross, Auburn L. 2018. *Speech stereotypes of female sexuality*. Berkeley, CA: University of California dissertation.
- Bedin, Cooper, Montreal Benesch, Marina Zhukova, Lal Zimman. 2023. Operationalizing gender: Implications of participant-driven measurements and methods for statistical modeling of open-response demographic data. Presentation presented at New Ways of Analyzing Variation [NWAV] 51.
- Bedin, Cooper, Montreal Benesch, Kirby Conrod, Marina Zhukova, Lal Zimman. 2024. The gender question: Current best practices for asking about sex/gender in linguistic research. Workshop presented at Linguistic Society of America Annual Meeting. <http://lalizimman.org/PDFs/LSA2024-Workshop.pdf>
- Benesch, Montreal. In press. /s/tylizing the /s/elf: The concurrent fluidity of gender and language. In Scott Burnett & Francesca Vigo (eds.), *Battlefield linguistics: Contemporary contestations of language, gender, and sexuality*. Berlin, Boston: De Gruyter-Mouton.
- Blackwood, Evelyn. 2014. Linguistic strategies and the negotiation of gendered identities in the “lesbi world.” In Lal Zimman, Jenny L. Davis, & Joshua Raclaw (eds.), *Queer excursions: Rethorizing binaries in language, gender, and sexuality*, 81–100. Oxford, UK & New York: Oxford University Press.
- Bucholtz, Mary. 2011. *White kids: Language, race, and styles of youth identity*. Cambridge, UK: Cambridge University Press.

- Bucholtz, Mary, Audrey Lopez, Allina Mojarro, Elena Skapoulli, Aiden C. VanderStouwe & Shawn Warner-Garcia. 2014. Sociolinguistic justice in the schools: Student researchers as linguistic experts. *Language and Linguistics Compass* 8(4). 144–157.
<https://doi.org/10.1111/lnc3.12070>
- Busby, Peter A. & Geoff L. Plant. 1995. Formant frequency values of vowels produced by preadolescent boys and girls. *Journal of the Acoustic Society of America* 97(4). 2603–2606.
<https://doi.org/10.1121/1.412975>.
- Butler, Judith. 1993. *Bodies that matter: On the discursive limits of sex*. New York: Routledge.
- Charity Hudley, Anne H., Christine Mallinson & Mary Bucholtz. 2020. Toward racial justice in linguistics: Interdisciplinary insights into theorizing race in the discipline and diversifying the profession. *Language* 96(4). e200–e235.
https://www.linguisticsociety.org/sites/default/files/e01_96.4CharityHudley.pdf
- Cheng, Andrew. 2020. Cross-linguistic f0 differences in bilingual speakers of English and Korean. *The Journal of the Acoustical Society of America* 147(2). EL67–73.
<https://doi.org/10.1121/10.0000498>
- Conrod, Kirby. 2019. *Pronouns raising and emerging*. Seattle, WA: University of Washington dissertation.
- Diehl, Randy L., Björn Lindblom, Kathryn A. Hoemeke, & Richard P. Fahey. 1996. On explaining certain male-female differences in the phonetic realization of vowel categories. *Journal of Phonetics* 24(2). 187–208. <https://doi.org/10.1006/jpho.1996.0011>.
- Dodsworth, Robin. 2009. Modeling socioeconomic class in variationist sociolinguistics. *Language & Linguistics Compass* 3(5). 1314–1327. <https://doi.org/10.1111/j.1749-818X.2009.00167.x>
- Eckert, Penelope. 2017. Comment: The most perfect of signs: Iconicity in variation. *Linguistics* 55(5). 1197–1207. <https://doi.org/10.1515/ling-2017-0025>.
- Fausto-Sterling, Anne. 2000. *Sexing the body: Gender politics and the construction of sexuality*. New York: Basic Books.
- Fitch, W. Tecumseh, & Giedd, Jay N. 1999. Morphology and development of the human vocal tract: a study using magnetic resonance imaging. *Journal of the Acoustical Society of America* 106(3). 1511–1522. <https://doi.org/10.1121/1.427148>
- Fruehwald, Josef. 2017. Generations, lifespans, and the zeitgeist. *Language Variation & Change* 29(1). 1–27. <https://doi.org/10.1017/S0954394517000060>.
- Graham, Calbert. 2013. Revisiting f0 range production in Japanese-English simultaneous bilinguals. *UC Berkeley Phonology Lab Annual Report* 2023. 110–125.
<http://doi.org/10.5070/P78WP244GC>.
- Hall, Kira. 2005. Intertextual sexuality: Parodies of class, identity, and desire in liminal Delhi. *Journal of Linguistic Anthropology* 15(1). 125–144.
<http://doi.org/10.1525/jlin.2005.15.1.125>
- Jackson, Peter A. (2004). Gay adaptation, tom-dee resistance, and kathoey indifference: Thailand's gender/sex minorities and the episodic allure of queer English. In William L. Leap & Tom Boellstorff (eds.), *Speaking in queer tongues: Globalization and gay language*, 202–30. Urbana & Chicago, IL: University of Illinois Press.
- Jones, Jacq. 2022. *Authentic self, incongruent acoustics: A corpus-based sociophonetic analysis of nonbinary speech*. Christchurch, New Zealand: University of Canterbury dissertation.

- Leonard, Wesley Y. & Erin F. Haynes. 2010. Making "collaboration" collaborative: An examination of perspectives that frame linguistic field research. *Language Documentation & Conservation* 4. 269–293. <http://hdl.handle.net/10125/4482>
- Nicholson, Linda. 1994. Interpreting gender. *Signs: Journal of Women in Culture and Society* 20(1). 79–105. <https://doi.org/10.1086/494955>.
- Rampton, Ben. 2010. Social class and sociolinguistics. *Applied Linguistics Review* 1(2010). 1–22. <https://doi.org/10.1515/9783110222654.1>
- Rickford, John R. 1986. The need for new approaches to social class analysis in sociolinguistics. *Language & Communication* 6(1). 215–221. [https://doi.org/10.1016/0271-5309\(86\)90024-8](https://doi.org/10.1016/0271-5309(86)90024-8)
- Shriberg, Elizabeth, Dwight R. Ladd & Jacques Terken. 1996. Modeling intra-speaker pitch range variation: Predicting F0 targets when “speaking up.” *Proceedings of ICSLP* 2. 650–53. <https://doi.org/10.1109/ICSLP.1996.607445>
- Snorton, Riley. 2017. *Black on both sides: A racial history of trans identity*. Minneapolis: University of Minnesota Press.
- Squizzero, Robert, Martin Horst, Alicia Beckford Wassink, Alex Panicacci, Monica Jensen, Anna Kristina Moroz, Kirby Conrod & Emily M. Bender. 2021. Collecting and using race and ethnicity information in linguistic studies. *University of Washington Working Papers in Linguistics*. <https://digital.lib.washington.edu/researchworks/handle/1773/48570>
- Voigt, Rob, Dan Jurafsky & Meghan Sumner. 2016. Between- and within-speaker effects of bilingualism on F0 variation. *Interspeech Proceedings*. 1122–1126. <https://doi.org/10.21437/Interspeech.2016-1506>
- Vriesendorp, Hielke & Rory Wilson. 2023. Minority genders in quantitative survey research: a data-driven approach to reconciling explicit representation and category resistance. Presentation presented at Lavender Languages and Linguistics [LavLang] 29.
- Wagner, Suzanne E. 2012. Age grading in sociolinguistic theory. *Language and Linguistics Compass* 6(6). 371–382. <https://doi.org/10.1002/lnc3.343>
- Zepeda, Ofelia, & Jane Hill. 1998. Collaborative sociolinguistic research among the Tohono O’odham. *Oral Tradition* 13(1). 130–156. <https://journal.oraltradition.org/issues/13i/volume-13-issue-1-native-american-oral-traditions-collaboration-and-interpretation/>
- Zimman, Lal (2014). The discursive construction of sex. In Lal Zimman, Jenny L. Davis & Joshua Raclaw (eds.), *Queer excursions: Rethorizing binaries in language, gender, and sexuality*, 13–34. Oxford UP.