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ORIGINAL PAPER

Technology and pronouns: disrupting the 'Natural Attitude about Gender'

Maren Behrensen[1]

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Abstract
I consider how video conferencing platforms have changed practices of pronouns haring, how this development fits into recent philosophical work on conceptual and social disruption, and how it might be an effective tool to disrupt the 'natural attitude about gender'.

Keywords Conceptual disruption · Gender · Pronoun sharing

Introduction

In this contribution, I discuss the practice of pronoun sharing on video platforms, and design choices that support this practice. I take this to be a localized example of conceptual disruption, i.e., "an action, event, or artifact [that] challenges […] entrenched conceptual or classificatory norms and practices." (Löhr, 2023, pp. 2–3) This example, specific as it is, is instructive both for how we think about technology, design, and conceptual disruption, and for how we think about practices that disrupt gendered linguistic practices.

The term 'pronoun sharing' refers to a range of practices in which speakers announce the pronouns with which they would like to be referred to. Pronoun sharing can happen through 'pronoun go rounds', in which each speaker introduces themself and states their preferred pronouns; it can be done through physical name tags; and in online environments, and video conferencing platforms specifically, it can be achieved by adding the preferred pronouns to the display of the participant's name. It is the latter practice that I am interested in here, and I will focus in particular on the developments on the platform Zoom during and after the Covid-19 pandemic.

In contrast to most other examples of conceptual disruptions that are discussed in the philosophy of technology (cf. Hopster, 2021; Hopster et al., 2023) this disruption is not caused by technological advances (unless we consider language itself a technology; Dove, 2018). While not dependent on technology, the disruptive nature of pronoun sharing can be supported and changed in interesting ways by specific technological design choices. These design choices can lower the social cost of conceptual disruptions that, as in this case, arise from the exercise of human autonomy and agency.

Pronoun sharing disrupts entrenched routines around the ascription of gendered terms to other persons. Following Barnes (2020) and Kukla and Lance (2022), I consider these ascriptions to be ethically and socially significant without necessitating a commitment to a specific metaphysic of gender. Pronoun sharing is conceptually disruptive insofar as it highlights this gap between ethics and metaphysics. Explicitly announcing one's pronouns and honoring such announcements as requests challenge the assumption that the correct ascription of gendered terms to another person should be obvious from their gender expression or some assumptions about their anatomical features.

"Rather," as Kukla and Lance put it, "gender ascriptions function to organize social space, and support or undermine people's autonomy, bodily agency, and self-determination within this social space, in important ways." (2022, pp. 1130–1131) In this sense, pronoun sharing is an exercise of the speaker's agency, and it can be a form of resistance against being assigned a gendered location in social space without one's input. Technological design choices for video conferencing platforms can support this agency, and make it more effective. The specific example discussed here can thus serve as a basis from which to reflect on conceptual

✉ Maren Behrensen
marenbehrensen@hotmail.com; m.behrensen@utwente.nl

[1] University of Twente, Enschede, Netherlands

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disruption as mediated by technology (rather than as a response to emerging technological developments).

My argument proceeds as follows: I will first outline the case of pronoun sharing on Zoom, then contextualize it within the general practice of pronoun sharing, and then consider in detail what makes this practice disruptive; consider the case of pronoun sharing without a gendered element to reinforce the point; and then show what makes it a case of conceptual disruption rather than an instance of conceptual change or conceptual engineering. Finally, I relate this back to the initial example to illustrate how design choices can support productive disruptions.

Online spaces and communicative disruption

In introducing the case of pronoun sharing on Zoom, I focus on the difference between conceptual and communicative disruption (cf. Löhr, 2022; I am taking this distinction from them without endorsing their normative recommendations). Conceptual disruptions affect the semantics and pragmatics of concepts (more on this below), while on my view, communicative disruptions are simply external 'noise' or delays affecting the progression of a conversation. In contrast, conceptual disruption denotes a challenge to the ways we use (networks of) concepts to make sense of the world around us.

As Löhr (2022, p. 838) puts it: "Most of the time, we apply our words and concepts without much reflection on whether we are entitled to such applications." Conceptual disruption provokes such reflection, and where the categories that shape our social environment are concerned, it troubles the notion that these categories are fixed or correspond to natural kinds. Communicative disruptions, on the other hand, are merely unproductive interruptions.

Examples of communicative disruptions include: speaking so softly that the people at the other end of the room cannot hear you, and needing to repeat what you said several times; background noise that makes it difficult to focus on what is being said; constantly, deliberately and unilaterally changing the subject of a conversation, or (a classic in online meetings) forgetting to unmute yourself before you speak. None of these affect the meaning and use of words, they just make communication more cumbersome.

Online conferencing platforms trigger some specific communicative disruptions (audio issues, or camera angles that make it difficult to read body language that would enable smooth, unmoderated turn-taking in physical settings). But they also have design elements that minimize other communicative disruptions. For instance, participants can write in a (private) chat or post links while they speak, thus eliminating the need to interrupt the entire meeting for a brief, additional exchange of information. Furthermore, participants' names are typically displayed permanently as part of their image, which reduces the need for introduction rituals, and greatly increases the chance that everyone is addressed and referred to correctly and without ambiguity (as a contrast, we can think of the impersonal and potentially ambiguous physical-space equivalent of "the person in the blue shirt at the back of the room"). Crucially for my example, the information displayed can include more than just the participant's name, e.g., their pronouns.

Pronoun sharing on Zoom began as an exploit of an existing feature, and then caught on among users inclined to support the practice. I first encountered it when participating in a reading group in the summer of 2020, where the moderator encouraged participants to share their pronouns by using the 'edit name' function to simply add them to the display of their name. By adding an official 'share pronouns' function in 2021, Zoom institutionalized this exploit, and gave users more control and autonomy in the process. In a blog post on the introduction of the new feature, the company's Diversity, Equity, and Inclusion Lead notes: "Numerous users have shared how they've been manually adding pronouns to their names and profiles within the Zoom platform. In fact, we here at Zoom have been doing the same ourselves." (Dickerson Stewart, 2021) In contrast, Microsoft has only recently announced the introduction of an 'add pronouns' feature for Teams, which would still need to be unlocked by administrators, and cannot be controlled directly by individual users (Hoard, 2023).

Zoom's new functionality also gives users the opportunity to control when their pronouns would be shared (never, only when prompted as the user enters a meeting, or always). This design choice is remarkable in two ways. First, it gives users control over whether and how they share their pronouns. This is significantly different from designs that provide a fixed list of pronoun choices and display the chosen pronoun in all given contexts. Second, this move simply standardized existing exploits, building on the ways users had already made use of the platform's existing features, and it did so without any additional controls or limitations on the existing practice. In this way, the new design element gave the users more autonomy and agency, and it came without any additional burden such as the forced sharing of pronouns, or a limited set of options.

The ethics of pronouns

This design choice is significantly different from how other companies have handled gender diversity on their platforms. Facebook, for instance, drew ridicule and anger when it introduced over fifty options for gender identification. But none of the options on the list has an effect on pronoun display, and the number of pronouns is still limited to three, and permanently displayed in the user's profile. Instead of giving users more control and autonomy, Facebook simply 'imposed' more options on them without actually giving

them more agency. In contrast, Zoom did what the computer scientist Katta Spiel (2021, p. 478) recommends for all 'gender boxes' in digital space: leave them free form, letting users fill in the information instead of simply proliferating labels.

This design choice not only gives users more agency, it also (as I argue in the following), minimizes (unproductive) communicative disruption while maximizing (productive) conceptual disruption. I will turn to the second part of this claim in the following section, and for now focus on the minimization of communicative disruption. As a contrast to pronoun sharing in online settings, consider two common forms of pronoun sharing in physical spaces: pronoun go-rounds and name tags with preferred pronouns.

Pronoun go-rounds are a common practice in physical spaces where (not all) participants know each other. As part of a general introduction round, these participants would also state their preferred pronouns. The two main concerns about this practice are, first, the possibility that sharing becomes mandatory, which could be very uncomfortable or even harmful for some participants (e.g., those who are still questioning, or not yet 'out' as trans; Haimson & Lee, 2019; Murphy, 2019; Pederson, 2022); and second, the proportion of time and energy expended on the practice to the chance that the provided information will be heeded. Pronoun go-rounds are likely to be efficient and effective for smaller groups, where introduction rounds do not take much time, and the information provided will be relatively easy to remember. The larger the group, however, the more impractical pronoun go-rounds (and introduction rounds in general) become.

The first of these concerns is a concern about autonomy: should pronoun sharing ever be compulsory? It seems that if we value pronoun sharing as an expression of autonomy, then for the very same reason, the practice should not be mandatory. Indeed, there are options to still use the practice with disruptive intent without forcing anyone to participate in it. For instance, a university lecturer could briefly announce their pronouns in order to set an example, without expecting or forcing any of their students to do the same (Pederson, 2022).

The second concern falls squarely on the level of communicative disruption: the larger the group, the more time introduction rituals take away from other communicative pursuits, and the lower the chance that there will be any uptake of the information provided in such rounds. Where this concern about group size applies, the other major form of pronoun sharing may be used: including them on name tags. For instance, many larger academic events have adopted the practice of displaying pronouns on participants' name tags. But this has the drawback that the information might be inconspicuous and easily forgotten.[1] In terms of epistemic uptake, we might say that name tags might not be disruptive enough (because they are hardly noticed), while explicit pronoun go-rounds might be too disruptive (because they would take up too much time in a larger group, or because not everyone feels comfortable with the expectation to participate).

However, in online settings where participants can simply choose to display their pronouns or not (and where membership and participation might be more fluctuating than in physical spaces), these concerns about communicative disruption and epistemic uptake no longer apply. Pronoun sharing no longer takes up any time and very little effort, and unless a host or a platform forces participants to engage in the practice, it is completely voluntary. Moreover, the information shared is much more conspicuous than in physical settings: when added to user names, it is always present for the other participants.

The online environment thus lowers the threshold for engaging in pronoun sharing by removing the need for direct verbal interaction, and it decreases concerns about harmful peer pressure. At the same time, it also increases the chance that the information displayed will be noticed and heeded. This environment makes it possible to foster the normalization of pronoun sharing, while making it more conspicuous and less tedious for the other users (and recipients of the information). Integrating this potential into a design feature tied directly to the personal information user can display on the platform lowers this threshold even further.

In other words: the design choice implemented in Zoom maximized the potential for conceptual disruption while minimizing communicative disruption. It has benefits in terms of user control and autonomy, and virtually no drawbacks. But what exactly are these benefits, and how can pronoun sharing be conceptually disruptive? These questions will be addressed in the following section.

Disrupting the natural attitude

In my view, the practice of pronoun sharing disrupts what Robin Dembroff (2021) has called "the natural attitude about gender." However, I want to distinguish a naïve interpretation of this claim from a complex one, and my argument will build on the complex interpretation.

On the naïve interpretation, the "natural attitude about gender" would encompass the belief that the social reality of gender is and ought to be binary; and that this social reality

[1] I have sometimes 're-engineered' conference name tags by writing my pronouns on them—not because I assumed that this information would actually be noticed and remembered, but because I wanted to draw attention to the fact that there was more information missing that I regarded as important.

is grounded (in some way) 'in nature'. On this view, pronoun sharing (especially when it concerns non-binary pronouns and neopronouns) would be conceptually disruptive insofar as it questions this binary. Someone introducing themself with *they/them* pronouns would disrupt the natural attitude by disrupting the binary, and they would disrupt the binary by claiming the social reality of non-binary gender identities. The disruptive nature of their introduction would then amount to a metaphysical claim about what gender is (along the lines of "there are more than two genders").

But this naïve interpretation assumes both too much, and too little. It assumes too much insofar as pronoun sharing does not need (and perhaps should not be taken) to imply any strong metaphysical claims (Barnes, 2020; Kukla & Lance, 2022). Rather, as Kukla and Lance and some recent discussions of the wrongs of misgendering (Kapusta, 2016) emphasize, the claim here is primarily an ethical one: When the speaker introduces themself with their pronouns, this is a request to respect their agency over their location in social space. This ethical claim can be put forward, understood, and heeded without any implications about the metaphysics of gender. As Kapusta (2016, p. 514) puts it, a trans person's request to respect their pronouns need not be evaluated in terms of a metaphysical claim about the extension of a categories such as "woman", "man", or "non-binary people." Claiming a specific set of gendered pronouns does not necessarily amount to claiming a specific gender identity (Kukla & Lance, 2022, p. 1141), nor does it need to be taken as resting on any strong assumptions about the nature and grounding of such identity categories.[2]

On the other hand, the naïve interpretation assumes too little in that it fails to provide a convincing explanation of how pronoun sharing can be disruptive in the case of binary pronouns. It suggests that the binary, natural attitude is disrupted by claiming spaces beyond the categories "man" and "woman." In this case, whether or not pronoun sharing is disruptive would depend on features of the speaker: a non-binary person sharing *they/them* pronouns would be disruptive, a cis ally or a trans woman (whose trans identity is not salient in a given conversation) sharing *she/her* pronouns would not be. This is implausible.

To see why, consider the political backlash against 'gender ideology' (Graff & Korolczuk, 2022; Kuhar & Paternotte, 2017), which currently tends to focus on trans persons (Behrensen, 2023), and includes practices such as pronoun sharing. Those who mobilize against 'gender ideology' primarily target those who Dembroff, quoting Riki Wilchins, has called 'gendertrash' (Dembroff, 2020, p. 3), i.e., those whose gender is not intelligible in social spaces. However, the backlash against 'gender ideology' targets resistant gender expressions precisely because they claim agency. Conversely, the 'natural attitude' is grounded in the idea that we do not and should not have agency over gender: it naturalizes gender by disavowing autonomy.

So a complex interpretation of Dembroff's idea as applied to pronoun sharing needs to take into account that pronoun sharing is disruptive because it claims agency over gender (and threatens the stability of the gender binary precisely because of this claimed agency). When we apply gendered terms to someone else, the natural attitude suggests that someone's appearance gives us enough information to choose the correct (grammatical) gender. The attitude is 'natural' in the sense that the information gleaned from someone's appearance is supposed to be grounded in fixed and obvious anatomical features, such as the tone of their voice, their facial features, their hair, or assumptions about the shape of their chest and their genitals underneath their clothes. It also implies that the information we draw from their appearance is organized in binary terms. Based on the information we receive from observation, we are supposed to pick either *he/him* or *she/her* pronouns to refer to the person; and being unsure about which pronouns to use, hesitating, or even having to ask is regarded as a failure to adequately process the available information.

To illustrate this point, consider Marilyn Frye's description of how she is stunned by the gender presentation of one of her students' friends. Unable to tell "Pat's" gender from appearances, she struggles to continue the conversation (Frye, 1983, p. 26). Most gender-nonconforming persons have experienced such reactions, some harmless or amusing, others violent. Negative reactions to gender expressions that are not immediately legible as masculine or feminine can range from overt confusion or slight hostility in a conversation, to being stared down or yelled at in gender-segregated spaces such as public restrooms, to being verbally or physically attacked on the street (Alabanza, 2022; Engelhardt, 2022). Note that whether or not the non-conforming person intends to draw attention to themselves, the reaction is commonly delivered in such a manner that they are made to bear the costs of their resistant gender expression.

The crucial point here is that in these kinds of hostile interactions, the 'natural attitude' reveals itself to be a normative claim; a normative claim about how we ought to use gendered terms that pretends to be a metaphysical claim about what gender is. At its core is the expectation that we should behave as if gender were 'natural', fixed, and utterly

[2] I thank an anonymous reviewer for emphasizing this point, and making it clear that I had been vague about this in a previous version of this paper.

beyond the scope of human agency.[3] This, too, is primarily an ethical claim: we should disavow our agency over gender.

However, in the case of gendered honorifics and pronouns, even superficial reflection shows that its supposed 'naturalness' is a social convention (Behrensen, 2018).[4] There is nothing 'in nature' that dictates that we must use binary, gendered sets of honorifics and pronouns; and the cues we are expected to rely upon in their application are social, not anatomical; and they are changeable. The pitch of someone's voice can be altered with speech training, facial features can be emphasized with make-up, hairstyles and clothing can express a wide range of 'gender cues', and all of these cues can be used to emphasize or conceal anatomical features. When a person wears make-up, speaks with a soft voice and a relatively high pitch, and styles their hair in a certain way because they want to be read as feminine, then this is a social achievement, not a 'natural' one (Bartky, 1990, pp. 63–82; Engelhardt, 2022). Both trans and cis women can succeed or fail at being read as feminine, and their success or failure does not depend on their anatomy, but on the way they use social cues. This is why the 'bathroom problem' is a concern for butch women, who are read as masculine, and tend to be challenged in public restrooms more frequently than trans women (Jones & Slater, 2020). But when social cues are broadcast and processed without disruption, they will be 'naturalized' in the sense that one could not help but read the other person as a woman or a man. The social labor that goes into the maintenance of a feminine or masculine appearance is thereby made invisible.

Pronoun sharing can be understood as a practice designed to make this social labor visible again, or to resist the notion that such social labor should be expended in the first place. It is conceptually disruptive in the sense that it can drive a wedge between the social practices that guide the ascription of gendered terms and the assumption that these practices need to restrict or disable agency by following some idea of a 'natural order'.

This effect can be understood as denaturalization, challenging what has been taken for granted. Quill Kukla's reflections on the denaturalizing character of philosophy apply in analogy:

> "Almost all of us believe all sorts of things about the basic structure of the world not only with total confidence, but without even noticing that these are beliefs that we have that need justification, because they are built so deeply into our assumptions. These beliefs show up to us as natural facts about the world that don't need justification or examination because they are just plain old how things 'naturally' are. One of the key functions of philosophy is to take these seeming natural givens and denaturalise them – that is, to give us critical distance from them, make us question them explicitly, and reveal their need for careful explanation and justification." (Kukla, 2020, p. 62)

Pronoun sharing can create such a 'critical distance' to the intuitive use of gendered language by prompting the question of how 'natural' our gendered ascriptions really are. As a practice in the sense described above (with pronoun go rounds, name tags, or pronouns added to user names) it is a relatively new phenomenon. It roughly coincides with an increased visibility of trans and non-binary persons,[5] but as a practice, it is not limited to trans and non-binary persons. The practice is very controversial among some queer and trans persons (Murphy, 2019; Wynn, 2019); and it is frequently used by cis allies to signal their solidarity; to such an extent that it may have a different function for allies (signaling reputation or norm-endorsement) than it does for queer and trans persons (communicating their agency; cf. Kodipady et al., 2023).

Complementing the point above, if we want an account of how pronoun sharing is disruptive that covers both 'non-binary' and 'binary' instances of it, then such an account also needs to allow for the possibility that some persons with resistant gender expressions reject the practice. This also means that pronoun sharing should not be taken to 'engineer' new gender identities; in contrast to those who, committed to the 'natural attitude', claim that it does. As a practice, it is primarily about the ethical scope of human autonomy.

Pronoun sharing without gender?

The 'natural attitude' removes gender identity from the sphere of polite conversation, while the practice of pronoun sharing seeks to pull it back. This is also why, as a practice, it is not limited to persons with an ambiguous gender expression, but can be and is being used by persons who would never be intuitively misclassified. In its ideal form

[3] The Roman-Catholic Church has produced an entire corpus of philosophy on this topic, and normatively, its dogmatists have learned to exploit the ambiguity of the term 'natural': between a description of how things are 'in nature' and how they ought to be according to an assumed (divinely inspired) 'natural order' (Behrensen, 2020).

[4] This is a commitment to the view that gender is socially constructed, which does not imply an anti-realist stance. Similar to Ásta (2018), Haslanger (2017) and Mallon (2016), I take socially constructed categories to be real: they shape our social realities.

[5] Googles Ngram viewer displays a sharp uptick in the use of the phrase 'preferred pronouns' beginning in 2011, which I take as indicative of a trend to 'share' rather than assume the pronouns someone uses. The phrases 'non-binary' and 'trans person' show similarly sharp upticks for the same time period (2011–2019). I obtained these results in separate Ngram queries with the phrases as rendered above.

then, it would create space for everyone to exercise agency over their gender expression.

There are important limitations to this practice. So far, it is a minority practice that seems limited to Indo-European languages with strong grammatical gender distinctions (mainly English, but also German, Scandinavian languages, Dutch, French, Italian or Spanish). For pronouns specifically, the practice would be pointless in languages that do not have gendered third-person pronouns (such as Finnish, Turkish, Bengali, or Thai) although it might still have a place when it comes to gendered honorifics and other gendered forms of address.

In order to see what the conceptual disruption of gendered ascriptions can and cannot achieve, the example of languages with gender-neutral pronouns is triply instructive. One could take it as evidence that a genderless grammar has little or no impact on material gender inequalities and misogynist and queerphobic attitudes (there is evidence from a study of Finnish and Turkish that the simple lack of grammatical gender does not mitigate gendered stereotypes; Renström et al., 2023).[6] However, my focus here is on the introduction of new linguistic practices (i.e., I am not taking pronoun sharing as full-blown conceptual engineering); and so I am not interested in a cross-linguistic comparison between languages whose grammar has always been strongly gendered and those whose grammar has always lacked strong gender distinctions. As far as the introduction of new linguistic practices is concerned, I will return to its political and moral dimension below, and will merely note here that there are also studies indicating that conscious efforts to use gender-neutral terms does have an impact on gendered attitudes (Gustafsson Sendén, 2021 on the adoption of the gender-neutral pronoun *hen* in Swedish).

Still, the existence of natural languages with little or no grammatical gender salience reminds us that language is not necessarily gendered, i.e., a language can fulfill its communicative and expressive functions without grammatical gender. And lastly, some of the 'genderless' languages provide interesting context for 'pronoun sharing' independent of the context of gender. Consider Bengali: it does not have gendered pronouns, but it has three different sets of second-person pronouns for different levels of familiarity (and three different sets of third-person pronouns for geographical proximity). For speakers of Bengali, there can thus be situations where it is appropriate to 'share pronouns' in the sense of letting another speaker know which level of familiarity is appropriate.

The same is true for languages such as German, which still has a strong distinction between the formal and the informal second-person pronoun (*Du* and *Sie*). There are linguistic conventions around when it is considered appropriate to use the informal pronoun, and rituals around 'offering' the use of the informal pronoun. Both the (unexpected) use of the informal and the (unexpected) use of the formal pronoun can become sites of conceptual disruption (e.g., several decades ago, the universal use of the informal pronoun in university settings was a deliberate attempt to challenge academic hierarchies).

In contrast, Sweden has already completed an engineered conceptual change in this domain: after the so-called *Du-reformen* of the late 1960s, the formal second-person pronoun *Ni* fell out of use, and it is common to address everyone (regardless of familiarity and status) by *du* and their first name. This conceptual change was not only thorough, but also deliberately engineered; it was meant as an attempt to make Swedish society less hierarchical, and the Swedish language less convoluted and less prone to giving unintentional offense.

I cite these examples to show that pronoun sharing is not necessarily a gendered practice (but currently generates plenty of controversy when it concerns a speaker's gender identity) and that it can express disruption and moral conflicts that have little or nothing to do with gender. What makes these 'genderless' examples particularly instructive is that they can illuminate how pronoun sharing is about autonomy, agency, and respect rather than gender as such. Consider the following (admittedly subjective) observation: As a native speaker of German, I appreciate how the use of the formal second-person pronoun can create professional distance (e.g., with students). Requesting the use of formal address can, in this sense, be an exercise of (professional) agency. This specific type of agency is not available to me in English or Swedish, but that does not make this feature of German less significant. There are other ways to request and communicate professional distance in other languages, but German, as of now, happens to offer this one. In contrast, speakers of Swedish or English might appreciate that the second-person pronouns in these language have a 'default' informality to them, while still embracing other linguistic gradations of intimacy and distance.

The point I want to draw from the discussion of these examples is that natural languages not only reflect social changes, but that their speakers can actively use them to affect the social space around them. Some of these changes and interventions are concerned with gender distinctions and gendered hierarchies, others not. And sometimes, linguistic agency of the sort sketched above introduces new words and creative new ways of speaking, which then turn out to be highly controversial. Gender-neutral, inclusive language, and gender-neutral pronouns (especially neopronouns) have triggered such controversy and political division that there are now numerous legislative initiatives to ban them, especially

[6] I thank one anonymous reviewer for raising critical concerns that prompted me to consider this point in more detail.

in education and official communication (such initiatives have been reported from France, Germany, Argentina, and the United States, often co-existing with attempts to make the official language more inclusive). The gender-neutral *they* in English is still hotly debated (Baron, 2018; Doll, 2013; Saguy & Williams, 2022), and the gender-neutral *hen* in Swedish took almost half a century from when it was first proposed by an Uppsala linguist to its inclusion in the official Swedish dictionary. And these are just the most elegant solutions; clunkier constructions in more heavily gendered languages such as French or German are even more controversial.[7]

As indicated above, I do not argue here for full-blown conceptual engineering, e.g., in the sense of recommending the universal use of gender-neutral forms (as Dembroff & Wodak, 2021 have done). I merely argue that the deliberate and explicit sharing of gender-related pronouns (whether these are binary, non-binary, or neopronouns) can be conceptually disruptive. Applying pronouns in response to visual or auditory cues seems 'natural' or 'intuitive' precisely because gender remains implicit. It is considered information that does not need to be stated or requested. Disruptions of this natural attitude make gender explicit, and pull it into the realm of human agency.

I suggested above that we should take pronoun sharing to not imply any deep metaphysical commitments (about what gender is, or who belongs in the category "woman"). If so, then disrupting the natural attitude is about claiming space for agency (and not about 'reinventing' gender). This makes 'gendered' pronoun sharing much more similar to the 'genderless' variants discussed above than it might seem at first glance.

The distinction between formal and informal second-person pronouns can represent a certain kind of social reality (e.g., hierarchy, dominance, professionalism, respect). We can embrace some parts of that social reality while rejecting others, and we do not need to assume that this specific distinction is the only way to represent this reality, nor that it is unchangeable. Negotiations around the use of formal and informal pronouns can become sites of disruption and agency. Similar considerations apply to 'gendered' pronoun sharing. Those who reject pronoun sharing as a practice will then need to explain why they refuse to allow agency in this particular case.

So far, I have laid out my case for regarding pronoun sharing as conceptually disruptive, considered how online environments can make this disruption more effective by reducing communicative disruption, and shown how the practice can disrupt gendered concepts without a commitment to a specific metaphysic. In the next step, I will locate these results within the discussion of conceptual disruption in the philosophy of technology.

Disruption, change, or conceptual engineering?

The paradigm case of conceptual disruption in the philosophy of technology seems to be that of technologically induced conceptual disruption (Hopster et al., 2023; Löhr, 2023), often in conjunction with social disruption. To give two examples: the development of artificial wombs may challenge the concept of 'motherhood' (Frank et al., 2023; Hermann, 2023), and the development of sex robots with human-like cognitive capacities may challenge the concepts of 'sexual fidelity' and 'adultery' (Löhr, 2023). In either case, the new technology leaves us with normative uncertainty about how to apply terms whose meaning seemed unambiguous before. If 'mother' used to refer to the person who carried a child to term and gave birth,[8] then the option of transferring the entire gestational process to a technological device might seem to threaten the normative weight of motherhood. And if we began to regard sex robots as sex partners rather than fanciful masturbatory devices, then this might cast doubt on what is considered 'cheating' in a committed, monogamous relationship.[9]

Conceptual disruption in this sense should be distinguished from both conceptual change and conceptual engineering. Disruption, in Löhr's view (2022), which I have adopted here, describes a moment in time when a classificatory scheme is challenged or contested. This challenge can be both unintentional and unsuccessful, which is what sets it apart from conceptual change and conceptual engineering (which implies an intentional attempt to 'ameliorate' or 'fix' words and their meaning; cf. Cappelen, 2018; Haslanger, 2012).

To illustrate the point with the two examples from above: the existence of artificial wombs might be a challenge to the meaning of motherhood, but we are not yet in a position to say whether 'mother' will undergo a conceptual change (or

[7] I call these solutions "elegant", because they have been in use as a gender-neutral singular for a long time, as the English *they*, or they fit seamlessly with the existing alternatives, as the Swedish *hen*: it mirrors the phonetics of the gendered pronouns *han* (he) and *hon* (she), and it is supposed to be reminiscent of the gender-neutral Finnish pronoun *hän*.

[8] It must be noted that the prospect of artificial wombs is in no way necessary to 'disrupt' the concept of motherhood. Practices such as adoption and gestational surrogacy, for instance, can be just as disruptive, and do not depend on any (high-end) technology. They have also arguably led to conceptual change, such as the distinction between gestational and social motherhood (see, e.g., the essays assembled in Haslanger & Witt, 2005).

[9] Once again, it should be noted that technology is not needed for such normatively charged disruptions. Persons in a polyamorous relationships, for instance, might consistently experience such disruptions in their communication about boundaries and commitments.

even disappear) as a result of this; and the point of Löhr's sex robot example is precisely that there is disagreement about whether a sex act with a human-like robot should be classified as masturbation or adultery.

Both examples also illustrate something that I believe is missing form Löhr's definition: the normative dimension. Conflicts regarding classificatory schemes do not need to have an explicitly normative dimension (in the sense that they ultimately express moral conflicts).[10] But cases discussed in the philosophical literature on conceptual disruption frequently express such moral conflicts (and I suspect that this is precisely what makes conceptual disruption philosophically interesting). Hopster et al. (2023, p. 149) propose three indicators of conceptual disruption: a conceptual gap (no concept is available), a conceptual overlap (several concepts are available), and a "misalignment" between a seeming conceptual fit and underlying values. I think that both artificial wombs and sex robots cause conceptual disruptions in the misalignment sense; they are disruptive precisely because they challenge underlying normative assumptions (about the value of gestational motherhood, or the meaning and value of fidelity in a committed, monogamous relationship).[11]

Conceptual disruptions might prompt us to revise our normative assumptions, and to 'engineer' our concepts as a result. Given that gender classification has been treated as a paradigm case of conceptual engineering (Dembroff, 2020; Haslanger, 2012) it is tempting to regard pronoun sharing as 'gender engineering' rather than 'gender disruption', even more so as pronoun sharing is intentional. However, as we have seen above, there are compelling reasons to not think of as an attempted or completed 'reengineering' of gendered terms and honorifics. The controversy around it does not primarily concern the metaphysics of gender, but the ethical question of whether and when it is justifiable to restrict someone's agency over their gendered location in social space.

As this type of agency is frequently and often aggressively contested, pronoun sharing is better regarded as a conceptual disruption than a deliberate attempt to engineer gender terms. And as pronoun sharing is neither universally practiced nor universally accepted, it does not signal a complete conceptual change either. But as it seems to become both more common (Jiang et al., 2022) and more controversial, and as there are deliberate design choices to support it, as well as an emerging 'ethics of pronoun sharing' (Haimson & Lee, 2019; Murphy, 2019; Pederson, 2022), it makes sense to reflect on its normative implications qua disruption.

If we agree with Kukla and Lance (2022) that disrespecting, limiting, or eradicating someone's agency over gender will hardly ever be justifiable, but also recognize that the practice of pronoun sharing can raise its own pragmatic and ethical concerns, then this raises the question of how we can cleverly 'design for disruption'.

Designing for disruption

I have invoked the example of Zoom here (in contrast to other online conferencing and social media platforms) because it meets important criteria for such a clever design. It took its starting point from practices that the users had already implemented themselves, and did not impose any additional constraints when these practices were 'institutionalized'. The design choice gave users full autonomy and control, while avoiding ethical and epistemic concerns about pronoun sharing in physical spaces, e.g., forced sharing or lack of uptake. These design choices support productive conceptual disruption while minimizing potential communicative disruptions: they 'denaturalize' gender by emphasizing and respecting the user's agency.

My focus here has been on the specific practice of pronoun sharing, but some of these considerations could apply to digital communication in a broader sense. While this would be the focus of future work, I still want to briefly outline some of these broader considerations. Social media platforms are often lambasted for the ways they pressure their users to engage in self-promotion and the curating of a particular public image (sparking research into narcissism and social media use; Casale & Bianchi, 2020). They allow for self-construction at the cost of giving up data and submitting to a variety of social pressures, misinformation, and algorithmic manipulation. The minimal information displayed on virtual conferencing platforms is of a different kind, but still an act of self-construction.

When users are able to display their pronouns in video conferences, they are exercising their agency over their own gender expression. The specific features of video conferencing software allows for a smooth integration of these actions into the general social framework in which they happen. These actions do not cost other participants any time or energy, but

[10] The conflict about the reclassification of Pluto as a dwarf planet certainly generated heated emotions, but it did not express a moral conflict. It was weakly normative in a pragmatic sense that applies to scientific classification (the discovery of many objects that were similar to Pluto in size and mass in the outer reaches of our solar system compelled a refined definition of 'planet' and the 'demotion' of Pluto to dwarf planet).

[11] In the case of artificial wombs, the problem is not that we do not know what to call the device, or that we might be tempted to call the device 'mother', it is that it questions the normative status of gestation in parenthood and family bonds. For sex robots, one might argue, as Löhr does, that the issue is one of overlap: we could either describe a sex act with the robot as masturbation or as adultery. But this issue only arises because the existence of sex robots challenges the normative status of mutuality in sex acts.

they are clearly legible as expressions of autonomy. Digital platforms have the potential to boost these expressions of autonomy. While platforms such as Twitter and Facebook are increasingly (and in many ways, rightly) viewed as businesses that ruthlessly manipulate their clients and treat their data as currency (Gertz, 2016), they can also serve as information hubs and narrative devices that drive political change from below (Tufekci, 2017). Queer persons use these platforms to build community across distance, and to construct, manage, and confirm their own identities over time (Bates et al., 2020). This, too, could be considered a disruption of the 'natural attitude'.

This disruption comes with an emphasis on agency in the face of 'intuitive', 'natural' gender classifications, and all the harmful stereotypes they entail. It is also agency in the face of a political backlash against queer and trans persons. In my view, agency is central to queerness and transness; it is about experiencing oneself and the gendered concepts that surround us as malleable, something less than a biological fate (cf. Dembroff & St. Croix, 2019). This agency sparks resentment, reactionary political activism, even violence; and many would regard it as either a delusion, or a dangerous appropriation (Bettcher, 2007). The current anti-trans backlash in particular builds on the idea that trans and queer agency is dangerous for women, thus pitting women against trans persons.

I do not have the space to argue the point in any detail here, but I believe that the recognition of agency and autonomy is as crucial for women's rights as it is for gay rights or trans rights; and that political attacks on the agency and autonomy of one group will affect the other groups sooner or later. In this sense, I welcome design choices that support productive conceptual disruptions by giving users more control.

Admittedly, the example discussed here is very small in scope. By itself, sharing pronouns on online conferencing platforms will not halt any reactionary backlash, destroy the natural attitude, or promote gender equality. And as indicated above, I regard the practice of pronoun sharing as a conceptual disruption, while avoiding the question of whether it is or should become an act of conceptual engineering (or what goals such engineering should feasibly pursue). But if my analysis of this small-scale example is plausible, then it can provide generalizable insights for designers who wish to support such disruptions; and each disruption might be a tiny contribution to defending agency and autonomy against forces that wish to impose their classifications by appealing to the 'natural order' of things.

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