

Books & arts



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Beyond the trans/cis binary

Gender-related terms should encompass the human experience and be pragmatic enough for research. **By Florence Ashley, Shari Brightly-Brown & G. Nic Rider**

"Are you transgender?" Participating in a study for their public-health class, neither Alex nor Luna knew how to answer. Alex uses they/them pronouns and identifies as agender. They are also among a growing number of young people who have been raised in a gender-neutral manner: their parents did not refer to them as a boy or a girl

until they were old enough to choose for themselves. Whatever genitals Alex was born with is not common knowledge. If you are agender and were never assigned a gender, does that make you transgender?

As for Luna, today she identifies as a woman, which aligns with the gender she was assigned at birth. But this is a recent development: Luna identified as a boy for as long as she can

remember and, after coming out as trans, lived openly as one throughout her childhood and adolescence. As a woman who has detransitioned, she often feels that she has more in common with transgender women than with cisgender ones, whose gender identity corresponds to the gender they were assigned at birth. Although Luna doesn't call herself transgender, she fears that answering 'no' to

Many ways of being

'Gender modality' refers to how a person's gender identity relates to the gender they were assigned at birth, and includes options other than cisgender and transgender. This is not an exhaustive list.

Agender: people who do not identify with any gender.

Cisgender: people whose gender identity corresponds to the gender they were assigned at birth.

Closeted trans people: individuals whose gender identity does not correspond to the gender they were assigned at birth, but who do not share their gender identity publicly.

Culture-specific identities: individuals can have identities, such as Two-Spirit identities in North American Indigenous communities and hijra on the Indian subcontinent, that might not align with Western concepts of gender and sexuality. People with these identities might not consider themselves cis or trans because of the Western philosophies that underpin these terms.

Detrans/retrans: People who have ceased, shifted or reversed their gender transition.

Gender questioning: people who are unsure of their gender identity and are in the process of working it out.

Intersex: people who were born or who endogenously developed sexual traits that differ from typical expectations of female and male bodies. Some intersex people do not consider themselves to be cis or trans.

People with dissociative identity disorder whose alters have distinct gender identities: people with this condition, also known as plural people, can have several identities, known as alters or headmates, that have distinct gender identities. These alters can have different gender modalities.

Raised in a gender-neutral manner: people who were raised without being referred to as a boy/he or girl/she until they were old enough to express their gender identity.

Transgender: people whose gender identity does not correspond to the gender they were assigned at birth.

the study's question means that her gender trajectory and experiences will be erased.

The difficulties Alex and Luna experienced might seem unusual. But many individuals find themselves unmoored from binary terms such as male and female, or cis and trans¹. In the United States, an estimated 9.2% of secondary-school students don't wholly identify with the gender they were assigned at birth², yet only 1.8% anonymously answer 'yes' when asked whether they are transgender³. These identities are not trivial. How people identify shapes not only their experiences of marginalization, but also their bodies – be it by influencing their smoking habits, whether they exercise, what they eat or whether they undergo hormone therapy or transition-related surgeries.

Human experiences are inevitably richer than the categories we carve out for them. But finding the right concepts and language to describe their diversity is an essential part of the scientific endeavour. It helps researchers to capture the experiences of participants more accurately, enhances analytical clarity and contributes to people feeling included and respected. Scientists need terms that are flexible enough to capture the nuances of people's experience, that leave space for language to evolve and that are nonetheless pragmatic enough to be used in research.

Encompassing diversity

The term 'gender modality' could enable researchers to broaden their horizons.

A person's gender identity is their sense of gender at any given time. By contrast, gender modality refers to how a person's gender identity relates to the gender they were assigned at birth (see go.nature.com/3x34784). It is a mode or way of being one's gender.

The best-known gender modalities are 'cisgender' and 'transgender', but the term allows for other possibilities, such as 'agender', which includes those who do not identify with any gender, and 'detrans' or 'retrans' for people who have ceased, shifted or reversed their gender transition. The term also makes space for gender modalities specific to intersex individuals, gender-questioning people, people with dissociative identity disorder and people with culture-specific identities (see 'Many ways of being'). Gender modality serves a similar purpose to sexual orientation, which describes a facet of human existence and makes space for orientations beyond gay and straight.

The term gender modality was coined in 2019 by one of us (F.A.) in response to frustrations felt as a trans bioethicist and jurist with the limits of existing language (see go.nature.com/3x34784). The term has since been used by transgender communities, clinicians and policymakers to describe the realities of trans communities and the heterogeneity of trans experiences. It is increasingly being used in

trans health research^{4–6} and has been included in official documentation by the government agency Statistics Canada (see go.nature.com/3wvzcwz); in educational materials by the US non-profit organization Planned Parenthood (see go.nature.com/4arxzuw); and in decisions by the Supreme Court of Canada.

In our view, researchers can use gender modality to improve their work in three important ways.

First, scientists can expand the gamut of gender modalities included in questionnaires given to participants, to capture a broader range of experiences than those represented by the binary of cis and trans. Formulating new categories, adapted to the study design, will enhance the validity of the research^{7,8}. It could also improve response rates and reduce the likelihood of people dropping out.

Researchers who exclude possibilities beyond cis and trans typically rely on several tacit assumptions about bodies and social experiences. For instance, they might assume that participants whose gender identity corresponds to their gender assigned at birth are cisgender men and women – which would be incorrect for people, like Alex, who were raised in a wholly gender-neutral manner. Or they could assume that a person's gender identity hasn't changed across their lifespan and that they can infer certain facts about the participant's body or medical history from their response – which would be incorrect for those, like Luna, who have detransitioned.

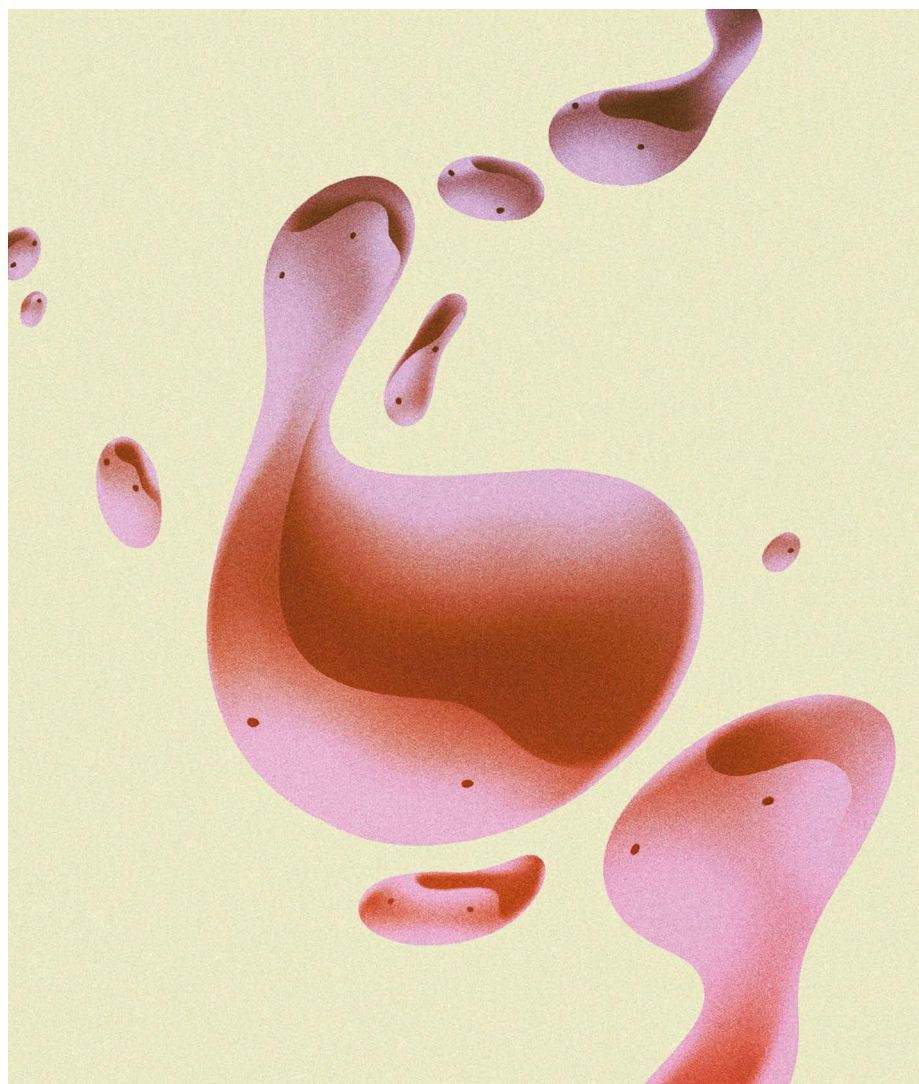
Other false assumptions could include the idea that every culture understands gender in a similar manner, that gender assigned at birth straightforwardly reflects anatomy at birth, that everyone has only one gender identity and that everyone can identify and communicate their gender identity.

This is not to say that every study should include every possible gender modality. The guiding principles are feasibility, necessity and respect. Sometimes, there are too few participants in a subgroup for researchers to analyse them separately. Moreover, some gender modalities could be irrelevant to the study question. For instance, it might not be necessary to include a detrans gender modality in a study if researchers are specifically interested in health outcomes among trans people. The point is to avoid uncritically assuming that the cis/trans binary suffices. It might, or it might not.

Capturing the human experience

The second way in which researchers can use gender modality to improve their work is by using it to refine how they phrase questions or discuss results.

By reflecting on gender modality, researchers can better ensure that participants feel respected, and can avoid assigning gender modalities that conflict with participants'



identities. Recognizing gender modalities beyond cis and trans is a matter of justice⁹. In some studies, offering write-in opportunities can help participants to feel respected despite the nuances of their experiences not being captured. But it could be as simple as using ‘gender modality’ instead of ‘gender identity’ or ‘transgender status’ in a table heading, because the last two terms can be seen as inaccurate or marginalizing.

Unlike terms such as transgender status, gender modality places cis, trans and other gender-expansive people on an equal footing. It reflects a universalizing conception of gender diversity¹⁰, in which everyone has a gender modality and being trans, detrans or cis comprises just some of the options in the vast expanse of human experience. This is important, given the long history of trans and gender non-conforming people being treated as deviant or abnormal.

Finally, researchers can use gender modality to think more meticulously about what it is that they are really trying to capture in their study.

Linguistic gaps abound when it comes to our ability to describe trans people’s experiences. For instance, discrimination against trans

people is often described as discrimination on the basis of gender identity. Although this shorthand might be workable, it is not entirely accurate. If a trans woman is fired for being trans, should we say that her gender identity was targeted when she has the same gender identity as cis women? Although her gender identity was part of the equation, it would be

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more accurate to say that she was discriminated against on the basis of her gender modality¹¹. Gender modality, not gender identity, is what distinguishes trans women from cis women.

Gender modality can help researchers to describe participant experiences with improved accuracy by shaping how they phrase their study questions or frame the discussion section of their papers. For example, asking whether participants experienced discrimination because of their gender identity

can cause confusion, which could be dispelled by asking whether they experienced discrimination because they are trans, detrans or another gender modality. Used thoughtfully, gender modality is a means of achieving improved clarity, accuracy and understanding. A researcher’s first question should always be: ‘What am I really trying to work out?’

Fluid and flexible language

Gender modality is not a panacea. Rather, it is one piece in the toolbox of those who engage in research involving human participants, whether in the medical, biological or social sciences. Its power lies in what people make of it. Our hope is that researchers and others will play with it, stretching it and exploring its full potential. Rather than foreclosing the evolution of language, gender modality welcomes it.

Not everyone is male or female. Not everyone is cis or trans. The sooner we make space for these truths, the better. And inviting scientists to adopt the concept of gender modality will hopefully foster research that better reflects the intricacies and nuances of our increasingly gender-expansive world.

The first step in science should never be to assume that something is correct. It should be to engage with the world in front of us – in all its magnificent complexity. Researching gender should begin with critically engaging with current language and concepts. Thoughtfulness, flexibility, curiosity and empathy are what science needs.

Florence Ashley (they/them) is an assistant professor at the Faculty of Law, University of Alberta and in the John Dossetor Health Ethics Centre, University of Alberta, Edmonton, Canada. **Shari Brightly-Brown** (they/them) is a postdoctoral fellow at the Institute for Sexual and Gender Health and in the National Center for Gender Health, University of Minnesota Medical School in Minneapolis. **G. Nic Rider** (they/them) is an assistant professor at the Institute for Sexual and Gender Health and director of the National Center for Gender Health, University of Minnesota Medical School in Minneapolis.
e-mails: fashley@ualberta.ca; brigh184@umn.edu; gnirider@umn.edu

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