Stardust and feminism: A creatureliness agenda

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People are living, breathing creatures. Dominant feminist discourses are situated within hegemonic human exceptionalism (HHE) which, by framing the body in terms of human forms of meaning-making and social life, eschews first-order embodiment (or creatureliness) as worthy of inquiry. Here, well-known reasons for avoidance of “the biological” are briefly summarized and an argument is advanced for meta-theoretical centering of creatureliness. A three-pronged agenda is proposed that embraces the creaturely body without the “-isms” (e.g., essentialism) and “-izings” (e.g., so-called “naturalizing”) that subvert feminist commitments. By unsettling HHE, executing the agenda would promote broader feminist coalitions and new scholarly collaborations aimed at fleshing out gender.

KEYWORDS
embodiment, gender, hegemonic human exceptionalism, creatureliness, new materialisms

Introduction

The universe began with a bang about 14 billion years ago. Transformations of stardust, energy, and gravity over the next 10 billion years yielded, among other things, Earth. After a billion years of cooling and declining acidity, life debuted, with every living thing from then on carrying hydrogen as old as the cosmos (Schrijver and Schrijver, 2020). Since then, a dazzling array of life forms has emerged and glided, trod, swum, sprouted, burrowed, and otherwise animated the globe.

Certain individuals spend time as a cell adrift in an aqueous milieu before metamorphosing into a bilaterally symmetrical tetrapod tethered to a host and then embarking on terrestrial life. There, they breathe air, eat, and defecate. They participate in a complex society in flexible ways contingent on, and constitutive of, body form and size, behavioral repertoires, social structure and composition, other life forms, and features of geography and climate (de Waal and Tyack, 2005).

These life forms—bonobos, elephants, humans, wolves, and others—live in ways that are enabled and constrained by their bodies, from the trillions of microbes each body hosts to overall mass, organ systems and specialized attunements to the world within and beyond the skin. They share some ways of living with blue whales, bluebirds, and bluebells. At the same time, each is in some ways distinctive at species, population, group, and individual levels and mutable on time scales from evolutionary to momentary. Sooner or later, they die.
What are the implications for gender studies of regarding humans not as “exceptional,” as minds housed in bodies that are inert input/output devices, as nodes or relations in networks, as wrought through human meaning-making, but rather as fully embodied creatures—as animals, as vertebrates, as mammals, as primates, as a particular sort of hominid? Taking up this question can spur scholarly and curricular innovation in service to feminism.

The rub: As Frost (2011) put it, “For feminist philosophers and theorists, the body as a living organism is a vexed object, so vexed, in fact, that in philosophical and theoretical sciences, it is often sidelined, bracketed, or ignored” (p. 69). Resolving that vexation can facilitate engaging the creaturely body without unduly constraining scholars’ prerogatives to focus on species and topics of interest.

Reclaiming the body

Unger (1979) argued that gender should be distinguished from sex because “sex implies biological mechanisms” (p. 1085). Unger did not refute human corporeality or biological sciences. The concern was with connotations of “the biological”: genetic determinism, reductionism, sex-typed behaviors as “hard wired.” The specter of an immutable sex binary was antithetical to feminist knowledge and commitments. Defining gender as sociocultural aimed to disrupt “-izing”—the binarizing, essentializing, and so-called “naturalizing” that sex evoked.

Unger’s call fostered vital change but reinforced dichotomies that undermine its purpose. Its “fatal flaw” was that “[i]n separating the biological from the social, it inadvertently reified both. If sex is to the biological as gender is to the cultural, the nature/nurture dichotomy is reinscribed” (Crawford and Fox, 2007, p. 483). The gender/sex, social/biological, nurture/nature dichotomies map onto each other and conjure others: fluid/immutable, mind/body, human/animal (e.g., Brescoll and LaFrance, 2004; Logan and Johnston, 2007; Overton, 2013). Nurture/fluid is to mind/human as nature/immutable is to body/animal. Thus, a gender [social/mind/human] cluster that enacts hegemonic human exceptionalism (HHE) is split from a sex [biological/body/animal] cluster. This G/S split reflects and perpetuates gender-and race-based segregation and stratification in academia as in society at large (Dess, 2022). Frost (2011) observed:

[F]eminists have been more comfortable with denaturalizing nature than with what we might call ‘deculturalizing culture’—or admitting that matter or biology might have a form of agency or force that shapes, enhances, conditions, or delimits the agency of culture. Yet, this wary reluctance, understandable as it is given historical precedent, is structured by an understanding of causation that binds feminists to the binaries they have otherwise been deconstructing… the concern about unwitting essentialism is bound by the terms of Cartesian dualism that put rationality, freedom, and agency on one side of an ontological divide and matter, passivity, and determinism on the other. (p. 76)

To realize feminist goals, the G/S split and its proxies must be replaced with richer formulations.

Adopt language reforms

The term biological should be used to refer to academic enterprises. This shift attends to the suffix of biology, the study of living things, and what biologists do. This institutional meaning is routinely conflated with the stuff of life at low levels of organization (e.g., cells, biochemistry). Biologists also take up how life is organized at higher levels (e.g., sociality, ecology), but such work is less schematic for “the biological.” The topics that draw the biologist’s eye and how they are studied vary wildly. Dumping them into a bucket labeled “the biological” and distinguishing them from “the social” makes no sense, especially given that the latter lacks institutional meaning comparable to biological. More precise terms, such as genes or nervous system, should be used when referring to topics in biological sciences. Similarly, sociocultural constructs should be identified with specificity (see Magnusson and Marecek, 2018, on unpacking “the social”), not termed nonbiological. Nothing about life is nonbiological in the sense that cells are not involved, and the institutional meaning—to wit, “things biologists do not study”—is hopelessly vague.

Replacing “the biological vs. the social” with a bigger, better lexicon will make the G/S split obsolete. Because this reform explodes exceptionalist dichotomies that remove humans from nature (natural/artificial, nature/people, “humans and animals”; Dess and Chapman, 1998), it will neutralize “naturalizing.” How to repurpose the terms gender and sex (again) will need to be negotiated.

Adopt an updated view of biological sciences

Transformations in biology—including epigenetics, developmental psychobiology, neuroscience, and evolutionary theory—debunk the linkage of “the biological” to immutability and system justification. The working
vocabulary includes terms such as contingent, probabilistic, dynamical, and path-dependent. Genes are not a “blueprint”: They are expressed variably and contingently on the environment, sometimes transgenerationally (Ghai and Kader, 2022). Similarly, developmental trajectories are viewed as sensitive to in utero and postnatal contexts. No vertebrate brain is “female” or “male”; brains develop and function flexibly, are largely the same within a species, and are conceptualized as a mosaic (Joel, 2021), inherently bisexual (Crews, 2012), and experience dependent (Hines, 2018).

Today’s evolutionary theory likewise is no tale of genetic determinism or hard wiring. Rejection of such simplistic notions is not new: Decades ago, seminal work on human mating strategies (Buss and Schmitt, 1993) refuted the notion that evolution yielded intractable sex differences, showing instead that “Mate preferences, far from being impervious to varying circumstances, are highly sensitive to temporal contextual conditions” (p. 230). The Integrated Synthesis (Pigliucci and Müller, 2010), which incorporates culture, multi-level selection, plasticity, and environmental control of gene expression, increasingly undergirds evolutionary theory in psychology. Project this actively underway (Narvaez et al., 2022) and would benefit from more feminist voices.

The call to overcome “biophobia” has come from psychologists (Salk and Hyde, 2012), sociologists (Freece et al., 2003), political scientists (Frost, 2011), and biologists [cf. Fausto-Sterling’s observation that “Culture shapes bones,” Fausto-Sterling, 2005, p. 1491]. Movement toward that end in gender scholarship and teaching must accelerate for the body to become more than inert matter or human meaning.

Adopt inclusive meta-theoretical frameworks

Grappling with massively complex phenomena requires a large tool kit and some division of labor. How can labor over gender be divided without devolving to proverbial blind men fighting over what an elephant is? A modest step would be adoption of meta-theoretical frameworks that locate scholarly enterprises in relation to each other. Two such frameworks distinguish levels of organization from macro to micro and time scales from deep time to nanoseconds (e.g., Bronfenbrenner, 1992; Li, 2003; Overton, 2013; Dess, 2022). Although the number and labeling of levels/scales are somewhat arbitrary, getting beyond two levels/scales prevents binaries, and labels can be negotiated. The point is to foster a shared understanding that although life exists at all levels of organization and on all time scales, a scholarly lens necessarily focuses on certain levels and scales. Such an understanding transforms “turfs” and “siloes” to equal-status locations in relation to each other, with some common and some distinctive interests and commitments.

A crucial premise is that everything about bodies at every level of organization is mutable on some time scale(s). Far from an exception, gender/sex expressions at all levels vary across time and contexts in many species (cf. Roughgarden, 2004). Anybody who regards gender/sex comparatively will anticipate the mixy/matchy, blendy/bendy nature of gender/sex in Homo sapiens, a globe-roaming, omnivorous, time-traveling, symbol-using, obligated social primate (de Waal, 2022).

The wide world of gender/sex features both variation and constraint. An example at the subcellular level: allosomes (traditionally called sex chromosomes). An XX/XY scheme is not necessarily for reproduction, and being homogametic (e.g., XX) is not “essentially female.” Across deep time, allosomes have been a flexible tool in the adaptation kit. Vertebrate species have 0–10 allosomes. In some reptiles and birds, the heterogametic individuals lay eggs, and some can reproduce either sexually or parthenogenetically. Moreover, allosomes do not determine sex-typed mating behavior. Every A. uniparens lizard, for instance, has XXX allosomes, is a parthenogen, and displays mating behaviors typical of egg- and sperm-producing members of related species (O’Connell and Crews, 2022).

On an evolutionary timescale, then, allosomes are flexibly related to bodies and behavior. On a developmental timescale, gene expression is probabilistic and context dependent so, for example, an XY human zygote will not necessarily grow up to have a penis, produce sperm, identify as a man or rajul, or in myriad other ways be like other XY individuals. However, those forms of contingency and mutability are different from how allosomes vary within a species on shorter time scales. Regardless of identity or intrauterine or cultural environment, at some stage every somatic cell in a human born alive has 1–5 allosomes, with XX and XY being the highest-frequency variants (∼99%). An XY zygote will not grow a uterus—regardless of sex assigned at birth and adult identity—and will not gestate a fetus, seek an abortion, or die giving birth. Human allosomes do not generate two human “kinds,” nor do they determine identity, behavior, lived experience, or social organization, validate treating gender as binary, or justify injustices. But they are matter that matters.

Using levels/scales frameworks to grapple with gender is compatible with conceptualizing bodies in symbolic, discursive, and cultural terms. In fact, it compels doing so. But it exposes the insufficiency of those (and any other) conceptualizations by illuminating domains of inquiry that are not tractable from those standpoints. These frameworks also illuminate paths to integration. Events at various levels of organization are presumed to interact through recursive loops on various time scales, and those loops pull for “cross-country” work. Research by Lisa Diamond, Sari van Anders, and Felicia Pratto exemplifies effective use of multi-level/scale, dynamical systems, and multi-method approaches to the complexity of gender.

Discussion

Reclaiming the body will allow feminists to take up in a more fulsome way the role of unmediated corporeal realities in individual and social well-being. For instance, it affords seeing the
project of overturning Roe v. Wade as partly about women and partly about members of a mammalian species able to gestate a fetus. Reproductive rights (or lack thereof) have everything to do with the traditional stocks-in-trade of feminists, such as challenging patriarchy, championing sexual and economic autonomy, and interrogating how family is defined. They also have everything to do with risks borne only by individuals on the receiving end of internal fertilization and gestation. If, like salmon and sparrows, humans laid eggs, gendering would play out differently in policy, practice, and everyday life.

If too much attention to reproductive biology smells of essentialism, too little attention seems awfully bourgeois given class, national, and racial disparities in maternal and infant mortality. Furthermore, a compelling case can be made that patriarchal control of gametic female reproductive prerogatives has dire fitness consequences for all stakeholders (Gowaty, 2020). Theory and policy arguments incorporating first-order embodiment can usefully complement those rooted in discursive practices or disembodied rights.

To be clear, defensively burying the creaturely body is not unique to mainstream feminism. Doing so pervades academia (Dess, 2022), perhaps due to a core implication of corporeality: mortality (Solomon, 2020). A silver lining of HHE’s pervasiveness, however, is that rejecting it has tremendous potential to positively impact academic culture and society at large. As David Abram observes in Becoming Animal (Abram, 2010):

Becoming earth. Becoming animal. Becoming, in this manner, fully human… Corporeal life is indeed difficult… Thus do we shelter ourselves from the harrowing vulnerability of bodied existence. But by the same gesture we also insulate ourselves from the deepest wellsprings of joy… Awakening to citizenship in this broader commonwealth… has real ramifications for how we humans get along with one another.

References

Abram, D. (2010). Becoming animal: An earthly cosmology. New York: Pantheon.

Alaimo, S., and Hekman, S. (Eds.) (2008). Material feminisms. Bloomington, IN: Indiana University Press.

Brescoll, V., and LaFrance, M. (2004). The correlates and consequences of newspaper reports of research on sex differences. Psychol. Sci. 15, 515–520. doi: 10.1111/j.0956-7976.2004.00712.x

Bronfenbrenner, U. (1992). “Ecological systems theory,” in Six theories of child development: Revised formulations and current issues. ed. R. Vasta (London: Jessica Kingsley Publishers), 187–249.

Buss, D. M., and Schmitt, D. P. (1993). Sexual strategies theory: an evolutionary perspective on human mating. Psychol. Rev. 100, 204–232. doi: 10.1037/0033-295X.100.2.204

Crawford, M., and Fox, A. (2007). From sex to gender and back again: co-optation of a feminist language reform. Fem. Psychol. 17, 481–486. doi: 10.1177/0959353507084333

Crews, D. (2012). The (b)sexual brain. EMBO Rep. 13, 779–784. doi: 10.1038/embor.2012.107

de Waal, F. B. M. (2022). Different: Gender through the eyes of a primatologist. New York: W. W. Norton & Company.

de Waal, F. B. M., and Tyack, P. L. (2005). Animal social complexity: Intelligence, culture, and individualized societies. Cambridge, MA: Harvard University Press.

Dess, N. K. (2022). “The end of disembodied mind: fleshing out psychology,” in Routledge international handbook of theoretical and philosophical psychology. eds. B. D. Stiff, S. C. Yanch and F. C. Richardson (New York: Routledge/Taylor & Francis Group), 55–77.

Dess, N. K., and Chapman, C. D. (1998). “Humans and animals”? On saying what we mean. Psychol. Sci. 9, 156–157. doi: 10.1111/1467-9280.00030

Dress, J., Li, J. A., and Wade, L. D. (2003). The potential relevances of biology to social inquiry. Annu. Rev. Sociol. 29, 233–256. doi: 10.1146/annurev.soc.29.020202.100012

Frost, S. (2011). “The implications of the new materialisms for feminist epistemology,” in Feminist epistemology and philosophy of science. ed. H. E. Grasswick (New York: Springer), 69–83.

Ghai, M., and Kader, F. (2022). A review on epigenetic inheritance of experiences in humans. Biochem. Genet. 60, 1107–1140. doi: 10.1007/s10528-021-10155-7

Gowaty, P. A. (2020). “Violating the inviolable: evolved reproductive prerogatives of individual women,” in A multidisciplinary approach to embodiment: Understanding human being. ed. N. K. Dess (New York: Routledge/Taylor & Francis Group), 96–101.

Gruz, E. (1994). Voluntary bodies: Towards a corporeal feminism. New York: Routledge/Taylor & Francis Group.

It carries substantial consequences for the way a genuine democracy shapes itself – for the way that our body politic breathes (emphasis original; pp. 3–9).

The reforms proposed here transform the term gender into an inclusive rubric that subsumes sex — to wit, a large repertoire of loosely associated characteristics that vary and are constrained at various levels of organization and on various time scales. Comprehensive understanding may elude, but a shared vision of an expanded scope of inquiry that is not rooted in HHE can move feminist scholarship in new directions.

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The author confirms being the sole contributor of this work and has approved it for publication.

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Hines, M. (2018). "Integrative psychobiology of gender development," in Gender, sex, and sexualities: Psychological perspectives, eds. N. K. Dess, J. Marecek and L.C. Bell (New York: Oxford University Press), 247–270.

Joel, D. (2021). Beyond the binary: rethinking sex and the brain. *Neurosci. Biobehav. Rev.* 122, 165–175. doi: 10.1016/j.neubiorev.2020.11.018

Li, S. (2003). Biocultural orchestration of developmental plasticity across levels: the interplay of biology and culture in shaping the mind and behavior across the life span. *Psychol. Bull.* 129, 171–194. doi: 10.1037/0033-2909.129.2.171

Logan, C. A., and Johnston, T. D. (2007). Synthesis and separation in the history of nature and nurture. *Devel. Psychobiol.* 49, 758–769. doi: 10.1002/dev.20274

Magnusson, E., and Marecek, J. (2018). "Setting the stage: gender, sex, and sexualities," in Gender, sex, and sexualities: Psychological perspectives, eds. N. K. Dess, J. Marecek and L.C. Bell (New York: Oxford University Press), 3–28.

Narvaez, D., Moore, D. S., Witherington, D. C., Vandiver, T. I., and Lickliter, R. (2022). Evolving evolutionary psychology. *Am. Psychol.* 77, 424–438. doi: 10.1037/amp0000849

O’Connell, L. A., and Crews, D. (2022). Evolutionary insights into sexual behavior from whiptail lizards. *J. Exp. Zool.* 337, 88–98. doi: 10.1002/ez.2467

Overton, W. F. (2013). A new paradigm for developmental science: relationism and relational-developmental systems. *App. Devel. Sci.* 17, 94–107. doi: 10.1080/10888691.2013.778717

Pigliucci, M., and Müller, G. R. (Eds.) (2010). *Evolution, the extended synthesis*. Cambridge, MA: MIT Press.

Roughgarden, J. (2004). *Evolution’s rainbow: Diversity, gender and sexuality in nature and people*. Berkeley, CA: University of California Press.

Salk, R. H., and Hyde, J. S. (2012). Contemporary genetics for gender researchers: not your grandma’s genetics anymore. *Psychol. Women Q.* 36, 395–410. doi: 10.1177/0361684312461774

Schrijver, I., and Schrijver, K. (2020). "The matter of life and death: how humans embody the universe," in *A multidisciplinary approach to embodiment: Understanding human being*, ed. N. K. Dess (New York: Routledge/Taylor & Francis Group), 9–13.

Solomon, S. (2020). "A brief history of death," in *A multidisciplinary approach to embodiment: Understanding human being*, ed. N. K. Dess (New York: Routledge/Taylor & Francis Group), 27–32.

Unger, R. K. (1979). Toward a redefinition of sex and gender. *Am. Psychol.* 34, 1085–1094. doi: 10.1037/0003-066X.34.11.1085