

Theodore Bach\*

# The Importance of Realism about Gender Kinds: Lessons from Beauvoir

<https://doi.org/10.1515/auk-2023-2011>

**Abstract:** Beauvoir's *The Second Sex* stands out as a master class in the accommodation of conceptual and inferential practices to real, objective gender kinds. Or so I will argue. To establish this framing, we will first need in hand the kind of scientific epistemology that correctly reconciles epistemic progress and error, particularly as pertains to the unruly social sciences. An important goal of the paper is to develop that epistemological framework and unlock its ontological implications for the domain of gender. As we will see, the real gender kinds that contemporary social scientists successfully identify and track are very much the same kinds to which Beauvoir was coordinating reference in *The Second Sex*. The correct identification of those kinds endures as a moral and political priority, regardless of one's other gender-related normative agenda.

**Keywords:** gender, Beauvoir, semantic externalism, scientific realism, natural kind, cultural evolution

## 1 Introduction: The Moral Importance of Scientific Realism about Gender Kinds

In the 1960's and 1970's social scientists and philosophers increasingly used 'gender' and gender-related terms to designate the cultural and contingent aspects of biological sex (see, e.g., Money 1973; Oakley 1972; Rubin 1975). This provoked a flurry of philosophical work in the 1980's and 1990's, developed from both analytic and continental perspectives, exploring and interrogating the underlying gender concepts (e.g., Alcoff 1988; Fuss 1989; Spelman 1988; Stoljar 1995; Young 1994). At present, philosophy journals are again teeming with analyses of what gender is, what

---

\*Corresponding author: Theodore Bach, Professor of Philosophy, Firelands College, Bowling Green State University, Bowling Green, USA, E-mail: theodorebach@gmail.com

gender ought to be, what gender terms mean, and what gender terms ought to mean.<sup>1</sup> What is striking about the new-wave analyses is that they almost all defer to one of two foundational methodological commitments. They either: (a) take quite seriously and proceed from an analysis of what our concept of gender encodes, how people use gender terms in various contexts, and/or what meanings are conventionally or contextually associated with our shared gender terms;<sup>2</sup> or (b) they begin with specific moral and/or political commitments, for example the values of anti-sexism or the inclusion of transgender people, and then they investigate what gender is or should be or must be in light of those commitments.<sup>3</sup>

Rather lost in all this, I submit, has been the methodological importance of a science-guided, naturalistic analysis of gender.<sup>4</sup> Such an approach defers epistemically and taxonomically neither to our concept of gender nor to our normative desires for gender. It defers to the objective and causal reality of gender as that reality is tracked and described over time with increasing accuracy by empirical methods. Those who espouse this approach need not morally or politically resign to that causal reality. On the contrary, they insist that a precondition of effecting morally positive change is the improved social coordination of reference to the causally important structures of that reality. They further insist that these causal structures are often unknown and beyond the control of investigators (particularly their current and historical stages) (Bach 2019a).

Notably, this is the more or less agreed-upon methodological starting point and modeling constraint for most *other* investigative targets that have moral and political significance. For example, when modeling the vector mosquito species responsible for the spread of malaria in Europe, or the rate of phenotypic change for the evolving viral lineages that cause SARS-CoV-2, or the ratios among atmospheric gasses that currently trap heat inside of our biosphere, we maintain an ongoing epistemic deference to the worldly objects themselves—to the real kinds

---

1 This is particularly true of analytic philosophy. The references provided in Jenkins 2023, Stock 2023, and Cosker-Rowland 2023 give a sense of the surge. Likely reasons for the scholarly uptake include the increased cultural and academic interest surrounding questions about transgender status, Haslanger's popularization of the 'ameliorative' strategy, and the increasing trend by which analytic philosophers, apparently unmoved by powerful critiques best exemplified in Laydman, Ross and Spurrett 2007, apply theoretical machinery from analytic metaphysics to gender-related explananda. More cynical explanations, for example those connected to publication pressure (Millikan 2012, 98–9) and the revolving philosophical Zeitgeist (Lycan 2017, 109–10), are also available.

2 Examples of this concept-first approach include Byrne 2020, Diaz-Leon 2016, Laskowski 2020.

3 Examples of the norm-first approach include Haslanger 2000; Jenkins 2016; Mikkola 2016.

4 I provide such an account in Bach 2012; 2016; 2019a; 2022. See also Mallon 2016; Khalidi 2013, and Godman 2020 for analyses of social kinds that share some of the naturalistic commitments defended there and below.

of mosquitos, viruses, and gasses as those kinds are increasingly revealed through empirical discovery. We continually revise our normative guidelines, concepts, and conceptual definitions in light of our ongoing discoveries into the causal structure of these kinds. What we do *not* do, and certainly *ought* not do, is defer instead to the semantic meanings embedded in this or that competing species (or virus, or gas) concept. Nor do we defer to prior ameliorative stipulations about these phenomena—stipulations that prejudice empirical possibilities, trajectories, and relational properties (Bach 2019a, 2022).

A rejoinder to the above is that the social world and gender in particular is metaphysically different—different in a way that justifies a methodological difference. We are told that gender and other social kinds are human-made, representation-dependent, and shot through with human values (particularly patriarchal values) right from the beginning. This is all true, but it does not encourage, let alone justify, abandoning the type of naturalistic, scientific epistemology that we correctly favor for other morally salient investigative targets. The values and mental states through which gender related phenomena arise do not work like magic or fiat lux. They are constituents of causal transactions. Such causal transactions are often more difficult for investigators to predict and systematize than those that structure well-understood domains of physics or meteorology—thus the challenge of conducting social scientific investigation. But complex and shifting causal patterns are not any less objective than well-behaved causal patterns.

Still, the idea that gender is strongly ‘socially constructed’ in a way that would cut off the value of a naturalistic, scientific epistemology has proven stubborn. Its lasting power is reflected in the current and dominant methodological binary flagged above. Part of the explanation for this, I suspect, is that the flurry of work from the 80’s and 90’s never reached anything like a consensus about either the semantics or metaphysics of gender. There was also a dearth of proposals that construed gender as a type of object that was amenable to then emerging naturalistic frameworks for scientific reference and epistemology. Very likely, these two factors permitted an implicit assumption to calcify—an implicit empirical *bet*, really. This was the bet that there are not real or natural gender kinds that play the same constraining epistemic and referential role as is played by real or natural kinds in other scientific domains, for example the roles played by species or chemical kinds. If this were a winning empirical bet—if it turns out that there are no such analogous real kinds in the context of gender—then researchers are well-served by the current methodological binary. But if it turns out that the bet fails and that there are such kinds—and I will argue here as I have elsewhere that this is indeed the case—then the dominant research paradigm staked on that bet, along with the concept-norm methodological binary to which it gives rise, are based on a mistake. It is the

same kind of mistake that would be made by malaria control experts who overlook real kinds of mosquito species out of allegiance to established taxonomies or norms.

In the next section, I offer a schema that makes good on some of the above jargon—‘target amenable to scientific epistemology,’ ‘natural or real kind,’ ‘deferring to worldly objects,’ ‘accommodation of conceptual practices,’ and so forth. In Section 3, I indicate how that schema compels us to infer from true empirical generalizations about gender differences that men and women are real kinds. They are real kinds with historical essences, analogous to how species are historical real kinds. Like biological historical kinds, they are constituted at different times by different populations, and they can change over time while retaining their kind-identity. In Section 4, I argue that whatever its contributions to existentialist ethics or phenomenology, we should view *The Second Sex* (hereafter *TSS*)<sup>5</sup> as a significant *scientific* achievement, functioning to socially coordinate reference to underlying real historical kinds of gender. When properly situated alongside more recent developments in the social scientific identification of gender—developments that often ride piggy-back on Beauvoir’s reference-achieving contributions—*TSS* remains valuable for understanding the empirical constraints and possibilities for the redesign of gender.

## 2 The Social Coordination of Reference to Real Kinds

How do experts and scientists use words and categories productively to gather information about the world? The correct answer to this question grants less control and less comprehension to word-users and concept-possessioners (including trained experts) than is often acknowledged or comfortably accepted by philosophers—particularly philosophers who write about the semantics and metaphysics of gender.

The best place to begin is towards the end, with the staggering success of science. Think of mRNA covid vaccines, gene sequencing, remote piloted drone planes, or images from the James Webb telescope. Given our epistemic starting points (and quarter-points, and mid-points), successes like these entail a striking degree of epistemic progress. We start with limited and partial informational grasps of

---

<sup>5</sup> All references to Beauvoir are to the unabridged *The Second Sex*, translated by Constance Borde and Sheila Malovany-Chevallier (2011).

the worldly samples that we encounter, and then over time we improve our identification and descriptions of the kinds into which these samples fall, thus allowing impressive predictive, explanatory, and intervention-based successes. The only account of scientific epistemology that sits comfortably with this non-negotiable progression from error and ignorance to epistemic success is the one that was built specifically to accommodate it, which is the realist, externalist epistemology to follow. Foreshadowing our later discussion, if we think that significant epistemic progress has been made with respect to the prediction and explanation of gender-related phenomena (it has), then that compels us to unlock the implications of this realist, externalist epistemological framework for the semantics and ontology of gender.

Among the clearest and most systematic exponents of a realist, externalist epistemology, particularly as that epistemology motivates specific ontological commitments, are Boyd (1979, 1989, 2021), Millikan (2000, 2017), and Kornblith (1995, 2002). My discussion borrows heavily from these authors and particularly Boyd. Below are ten central commitments of this framework, schematized and interpreted (hence ‘schema point,’ or SP) in a way that motivates the framework’s application to the social sciences and the science of gender (see also Bach 2022).

SP-1. Scientific kind categories, for example *electron*, *Mytilus edulis*, *water*, *women* and *men*, do not have analytic definitions. They are not subject to necessary and sufficient conditions. They are not beholden to some central description or other.

SP-2. Scientific kind categories, for example *electron*, *M. edulis*, *water*, *women* and *men*, do have what might be called natural or real definitions. These definitions are provided by the actual, clustered properties in the world together with the causal mechanisms that explain and maintain those clustered properties.

The definitions from SP-1 are representational or conceptual entities. SP-2 definitions, in contrast, are actual, objective property clusters. What is distinctive to the realist or naturalist schema is the priority and epistemic deference given to the SP-2 definitions over SP-1 definitions. The common blue mussel species, *M. edulis*, is not defined by some set of necessary conditions imposed by this or that evolutionary biologist. They are defined by the actual causal and historical properties of the species—the SP-2 definitions—to which the representational definitions may or may not be aligned. To the question ‘what are those blue shell creatures over there?’, the correct answer is given by the SP-2 natural definition. If someone responds instead with a SP-1 conceptual definition, for example a definition from a scientific dictionary or journal article, the correct if snarky reply here is ‘no, that is

so-and-so's theory or educated hunch as to the SP-2 description that in fact defines those creatures.'

SP-3. The natural definitions from SP-2 are subject to *a posteriori* discovery, confirmation, and disconfirmation. They are not subject to researcher's introspection, thought-experimentation, intuition, or stipulation.

Scientists and theorizers, like lay persons, are not in control of what defines the thing about which they are inquiring, describing, theorizing, and experimentally manipulating. Which of two disagreeing biological taxonomists is correct about what the populations of mosquitos are that in fact spread malaria to humans has nothing to do with their (or our) intuitions or thought experiments or stipulations. Consulting mental states like intuitions might be helpful for probing the contours and implications of SP-1 definitions, but we should not take such activities as guides to the natural definitions of kinds. Reliable guides consist instead of actual causal transactions with explanatorily important individuals, kinds, and properties (SP-7, SP-8 below).

By tying natural definitions to ongoing empirical investigation in this way, we are led to:

SP-4. Natural definitions are always open-ended. There is no revision ruled out by purportedly central descriptions.

Beginning in the 1970's and at least through the 1990's, most philosophers more or less accepted the force of Kripke's and Putnam's arguments against descriptive theories of reference for proper names and natural kinds, and they also appeared to accept Kripke's and Putnam's sketch of an alternative, causal theory of reference. The force of that acceptance, at least in practice, has waned. For example, those who espouse concept-driven or norm-driven analyses of gender (or any other empirical phenomena) chronically overestimate the extent to which the world heels to our intentions, beliefs, or desires.

I suspect that part of the reason for this waning is that the brand of externalism that had become standardized in the 1970's-1990's never in fact relinquished control from human minds as to the nature of the objects of thought and scientific investigation. In Millikan's (2001) terms, the Putnam-Kripke model had vanquished the 'flower' but not the 'seeds' of mental-state controlled accounts of reference. This was (and is) evident in the way that philosophers analyzed the 'baptisms' and 'naming ceremonies' that were an important element of the alternative, causal story about reference. We were told that investigators' dubbings and ostensions to kinds must be constrained by their descriptive intention to refer, say, to a kind of

medium-sized animal species rather than, say, one of the indefinitely many other nested or overlapping kinds also present (see, e.g., Devitt and Sterelny 1999). Resulting ‘conceptualist’ (Thomasson 2007) and causal-descriptive ‘hybrid’ accounts of reference, while perhaps keeping mental-control accounts of meaning from running amok, thereby placed limits on empirical discovery.

Such limits are here rejected. Were they not rejected, then we implausibly grant ourselves *a priori* knowledge of the nature of the things that we investigate, for example that they are necessarily an animal species or, in the case of Haslanger (2000), that they are necessarily subordinated (or privileged) on the basis of their perceived sex.

A consequence of SP’s 1–4 is:

SP-5. The clustered properties given in (2) are fully *representation-independent*, or *mind-independent*.

Care is needed on this point. We should not confuse SP-5 with the rejection of the following truth: that human actions, which are clearly mediated by human mental representations, bring about causal changes to the properties that naturally define a category. Of course, they do. What SP-5 is denying is that natural definitions are somehow merely projections of our customs, scientific paradigms, or conventions, or that they are ‘socially constructed’ in some deeper, ontologically mysterious sense. This is Richard Boyd’s ‘no non-causal contribution’ principle (e.g., Boyd 1989, 22). That rejection is bolstered by our next commitment:

SP-6. Scientific achievement and success—in causal explanation, prediction, intervention, etc.—results from the causal regulation of researchers’ usage of terms (concepts, classifications, etc.) and investigative practices *by* instantiations of the kind.

I will say more about ‘causal regulation’ below. Here, the key point is that natural kinds play *their role* in our epistemic success. They contribute mind-independent stability and repeatability (Boyd 1979; Millikan 2000; Kornblith 1995). From an epistemic point of view, we are fortunate that the world happens to come packaged in this clumpy, clotted way. As Millikan (2010) points out, most of the logical space of possible property combinations is empty. Fire-hydrants do not blend into quasars. There are no kangaroo-orca hybrids a characteristic property of which is spontaneously combusting while floating in diamond-crusted soap bubbles. We are delighted when sci-fi populates such regions of logical space and allows us to simulate the counterfactual possibilities, but our enjoyment here depends on the default of uncommon stable property clusters.

It is thus to these relatively uncommon sites of repeating property cohesion that we wisely ramp up our investigating efforts. These sites are the natural kinds—groupings for which members share a multitude of properties for the same underlying reason rather than by accident. By studying one or several members of such a kind and given its status as a natural kind (itself a matter of empirical discovery), we can reliably project what we have learned to unencountered samples. If we want to have predictive, explanatory, and intervention-based success (we do), then we ought to defer in our information-gathering efforts to these property clots as revealed by ongoing, open-ended empirical discovery. Notably, this is a precondition of our being able to *change* those property clusters and to make them more or less numerous (assuming, given the nature of those real kinds, such changes are possible).<sup>6</sup>

Such stable property clusters are found in the ‘social’ world in addition to the chemical, meteorological, and biological (etc.) worlds. Given connotations of intrinsic essence and biological determination, it can be helpful to call these ‘real’ rather than ‘natural’ kinds. However, we should not lose sight of the fact that these social real kinds have the same ontological structure as natural kinds generally. We already knew (discovered, rather) from the case of the categories of evolutionary biology that the underlying reason for property samenesses among members of some natural kinds (species, homologous traits, etc.) was a shared historical and/or relational property rather than a shared intrinsic or internal-physical property. Put very roughly, members of such kinds share properties because they are copies of one another. Boyd (1999), Elder (1995), Millikan (1999, 2000), and Griffiths (1997) then generalized this historical basis for kind unity to the social and human sciences, indicating how members of certain social kinds of humans, or members of certain artifact kinds, probabilistically share properties because (roughly) they were produced from the same historically situated process of cultural replication. In Bach (2012), I argued that we should view the kinds *women* and *men* in this way—as natural or real kinds for which kind-members share likenesses on account of their being made reproductions by historically situated copying mechanisms that have this purpose. In Sections 3 and 4, I add new detail to this model and highlight connections to *TSS*.

The next two points underscore the epistemic importance of causally calibrating our word-use and categorizing behavior to a world sparsely populated with inductively rich natural kinds:

---

<sup>6</sup> See Bach 2019a for critical discussion of how current proposals in social ontology reflect confusion or neglect of the relationship between the empirically discoverable diachronic features of real kinds, on the one hand, and the project of bringing about desired normative ends, on the other.



SP-7. A given category or term *T* refers to (provides epistemic entry or access to, enables information gathering towards) a kind *K* if there are mechanisms and relations in place between *K* and *T* (e.g., detection and measurement practices, observation, ostension, testimony, etc.) that causally regulate *T*'s use in a way that brings about epistemic successes (accurate predictions, explanations, etc.) with respect to *K*.<sup>7</sup>

Think of terms and effective taxonomies as markers that corral others (and oneself later) to the inductively rich property deposits that we are here terming natural or real kinds (as a meta-demonstration, think of my use of the term 'real kind' as corralling you and others to a repeating ontological structure—an ontological structure that is a causal relata in an important-to-understand epistemic process). Such terms and taxonomic categories are causally down stream from our interactions with the world, but they also direct future causal interactions with that world. The more that they are causally conditioned by the real kinds—whittled over time by trial and error, improvements in detection instruments, discovery of new samples (etc.)—the more they are in alignment with those kinds. The evidence that they have been whittled as such just is the more effective way that they are directing and filtering investigators' causal transactions with the sources of that whittling, the real kinds.

Reflection on cases of epistemic success should not make us lose sight of the following point, which follows from each of those so far discussed:

SP-8. Natural (or real) kinds play this causal regulating role (if they do) regardless of whether researchers, and more generally anyone who employs these terms and conceptual categories, fully or even partially understand the real nature of the clustered properties and underlying causal homeostatic mechanisms that define such kinds (SP-2).

As Wilson (1992) points out, taxonomic classification is a matter of life and death, and cultures everywhere have developed conceptual and inferential practices that are in impressive alignment with nature's real kinds. But this does not entail that they (or us) understand the nature—the underlying cause of property homeostasis—of the kinds to which their terms are causally calibrated. As a rule of thumb, if you can track some of a kind's proximal features, and if those features reliably covary with the kind's more distal and epistemically elusive essential features (e.g., microstructural or evolutionary relationships), then your ignorance about the essential properties is typically compatible with achieving various degrees

---

<sup>7</sup> See, e.g., Boyd 1979; 2021, 2871.

of epistemic and practical success (depending on your particular projects). Similarly, it is not uncommon for researchers and theoreticians, perhaps through some combination of ostension, description, term use, and measurement technique, to make considerable progress in coordinating reference to real kinds while not understanding the underlying reason for the samenesses across the samples so-tracked.

Two final points are important for our purposes:

SP-9. Partial or muddled reference occurs when the (limited) epistemically productive use of a category resulted from its causal regulation by multiple, undistinguished natural kinds.<sup>8</sup>

SP-10. Improving epistemic success is a matter of ‘focusing’ reference. This often requires the introduction or modification of terms to improve the socially coordinated causal regulation of investigative and inferential practices.

Early uses of the category/term ‘memory’ and associated measurement practices by psychologists, while epistemically helpful, were not as helpful as they could have been. As revealed by later discoveries by cognitive scientists, historical uses of the memory concept were equivocal between (at least) working memory, long-term memory, and short-term memory. A similar history of conflation applies to terms like *intelligence*, *jade*, *mass*, and *consciousness*.

We should view this form of partial reference as particularly common in the social sciences. This is because the inductively rich historical kinds that afford social scientific epistemic success are sufficiently elusive so as to make the type of causal interactions that would unambiguously single out a particular kind rather unusual (see Bach 2022 for discussion). Per SP-10, an important form of scientific progress is then a matter of focusing reference—of aligning our categories, via the forms of calibration reported in SP-7, more closely with the disambiguated real kinds.

There is a critical social dimension to this activity. Researchers, for good reason, are trained to define their terms at the outset of a journal article. But they should not thereby take themselves to be establishing that to which their use of that term in fact refers. The terms we use, whether species terms, gender terms, or psychological terms, have deep and rich histories of social collaboration and causal regulation.<sup>9</sup> They are like multi-century homes to which successive generations of families, workers, and teams of subcontractors have contributed. No one person owns control or authorship. Individuals might tweak definitions or tilt slightly

---

<sup>8</sup> See Field 1973; Boyd 1979; Millikan 2000, 68.

<sup>9</sup> See also Boyd 2021, ch. 3.9; Millikan 2005; Dennett 2017, ch. 12.

angles of ostension, but whether these adjustments underwrite new causal regulating relationships between investigators and real kinds (or properties) is an empirical question answerable only in the future. If such changes do obtain (intended or unintended), then it is a further empirical question whether they have improved (focused) reference to real kinds, thereby improving our ability to predict and intervene in the causal order; or whether they have muddled reference to real kinds. This latter possibility is a real and underrated danger, particularly in disciplines like philosophy where researcher's credences can be strongly affected by social and psychological factors and where what counts as epistemic achievement—the mark of epistemic access and reference—is *itself* a matter of contention (see Bach 2019b).<sup>10</sup>

### 3 On the Possibility of Knowledge about Gender

Consider the following admission about term usage, taken from a standard textbook on gender development:

How are the terms 'sex' and 'gender' used now? Actually, there is no convention for the use of these terms that is accepted by all scholars of sex and gender, even within a single discipline like psychology. Some scholars rarely use the word 'sex' except to refer to sexuality, and others rarely or never use the word 'gender.' Some call boys and girls the 'two sexes,' and others call them the 'two genders.' Some refer to 'sex differences' in behavior, others to 'sex-related differences,' and still others to 'gender differences.' Some talk of 'sex roles' and others talk of 'gender roles.' It is possible to read a single issue of a journal and find all of these terms used by different authors. (Blakemore, Berenbaum, and Liben 2009, 3)

In the last decade this terminological landscape has become more fragmented. From the perspective of our realist, externalist, metasemantic schema, this situation is not surprising. It reflects at least the following: (i) uncertainty about the causal explanation of population-level shared features among subject groups; (ii) instances of partial reference; (iii) theorists' overestimation of intentional control over the referential meaning of their own terms; and (iv) the inevitable challenge, per our discussion of SP-10, of *socially* coordinating reference to real kinds over time.

Nor is this situation incompatible with the identification of real kinds and significant epistemic achievement. If you perform a main subject index search in the database PsycINFO for studies on *Human Sex Differences* since the year 2000, it will

---

<sup>10</sup> See also Davis 1971 and Dawes 1994 for discussion of some of the non-epistemic influences on expert credences in social theory and the social sciences respectively.

yield approximately 52,953 studies of which 544 are meta-analyses.<sup>11</sup> These studies indicate important population level differences with respect to: adolescent surgery, adult dating habits, prevalence of eating disorders, rates and styles of elective cosmetic surgery, prevalence of Autism Spectrum Disorder, performance on mental rotation tasks, intentional suicide attempts by self-poisoning, online pornography consumption, and much else.

It is a difficult empirical question which of these population-level differences are causally sourced primarily in an individual's membership in sex-based physiological kinds; which are causally sourced primarily in the cultural processes and mechanisms through which social groups differentially condition, treat, institutionalize, and conceptualize sexed bodies; which are causally sourced in some blend of these; and which are causally sourced in some other factor(s). Nonetheless, there is strong evidence that some of these property differences—for example those referenced in true generalizations about kilt-wearing, college graduation rates, and rates of intentional self-poisoning—are causally explained primarily by the forms of social conditioning, social learning, and constraining or enabling institutional relations to which individuals are differentially subjected. And there is strong evidence that various other property differences and associated true generalizations—for examples those about prevalence of Autism Spectrum Disorder, adolescent surgery, and motor activity level for infants—are causally explained by individuals' membership in physiologically defined kinds. As Beauvoir might put it, the former generalizations hold because the properties to which they refer are 'imposed' on individuals "from the exterior" (*TSS*, 312), whereas the latter hold on account of "the physiological given" (*TSS*, 46).

To gather information about these different sources of causal explanation effectively, we will need semantic labels and other mechanisms of causal regulation that will socially focus reference to the distinct, causally rich kinds as they are found in the world, making sure not to conflate their sources of causal homeostasis.<sup>12</sup> Putting aside issues of historical term usage, from an epistemic point of

---

<sup>11</sup> This search exercise originates in Wood and Eagly 2012, 91, who identified about 22,000 articles between the years 2000 and 2011.

<sup>12</sup> This does not preclude there being properties that are causal expressions of both at once. We should keep in mind that one of the reasons that reference focusing, and hence achieving precise causal explanation, is so challenging in the social sciences is that the subjects of empirical studies—individual persons—are concurrent members of many causally important real kinds. This is one sense of 'intersectionality.' A given person at a given time might be intersectional between a physiologically defined sex-based kind, a culturally defined gender kind, and myriad other historically defined social kinds. A token behavior might be causally sourced in one or another of these memberships (or even a blend). Nor do the above comments about causal regulation preclude there being additional and distinct kinds, for examples those connected to gender identity, to which investigative and terminological practices should be causally regulated.

view it does not matter which string of symbol(s) we use to facilitate that social coordinating function. The important thing is that whichever terms, ostensive acts, and explicit definitions are employed that they improve the social coordination of information-gathering with respect to the mind-independent real kinds. When that improvement occurs, it is almost always because the referential acts deconflated real kinds previously blurred together by muddled labeling and overly general investigative practices. The result is always improved predictive and intervention capabilities.<sup>13</sup>

And that is precisely how I recommend that we understand the contribution of Beauvoir's *TSS*. Over and over, Beauvoir exposes the conflation of sex-based and culture-based explanations of differences between men and women. Over and over, Beauvoir works to modify or newly establish causal regulating mechanisms that will enable more focused epistemic access to real kinds. Beauvoir does this by ostending to, unifying disparate bodies of empirical research about, naming, and carefully describing important causal structures with respect to how societies, families, institutions, and individuals assimilate, control, teach, objectify, self-objectify, penalize, reward, enable, and obstruct different kinds of sexed bodies.

Before defending that claim in relation to Beauvoir's text, it will be helpful to say more about the real kinds to which I am claiming Beauvoir helped coordinate reference. This is a theory about the SP-2 natural definitions of the real kinds to which Beauvoir and subsequent social scientists have causally calibrated their use of gender and gender-related terms. As discussed in the context of SP-6, I think there is good to reason to understand these kinds as historical kinds, analogous to historical biological kinds, where members share likenesses on account of their being subject to the same process of cultural replication and causal connections to a token historical environment (Bach 2012).

This is a historical account in two senses. First, there is the social history of the 'gender content' that is installed. That history explains how and why different suites of behaviors (entitlements, burdens, etc.) became characteristic for different sexed bodies. It also explains the development of the cultural mechanisms designed to install the behavioral dispositions. I provide an account of that history in Bach (2012) sections V.A–V.C, drawing from the empirical frameworks of (among others) Wood and Eagly, Iversen and Rosenbluth, Alesina and colleagues, and Lerner. That

---

<sup>13</sup> If we are not bracketing historical usage, then the question becomes whether proposed modifications of existing term usage better focus or rather muddle reference to real kinds. To answer that question, we have to wait and examine whether the proposal's uptake, if there was any (there usually is not), leads to greater achievement, e.g., in empirical prediction. This is often a difficult empirical question to assess, particularly for disciplines that rely on armchair or theory-driven practices (Bach 2019b).

account overlaps in interesting ways with the one given by Beauvoir in Parts 1 and 2 of Volume I of *TSS*. Some of these overlaps are explored in the next section.

Second, it is an account of the history of the individuals in whom that gender content is installed. If the former history is analogous to the phylogenetic history of a biological kind, the latter is analogous to the ontogenetic history of an individual who, given this ontogenetic history, comes to participate in the biological (or in this case social) kind.

The ontogenetic story is one of gender installation. Based on bodily appearance and particularly one's sex classification at birth, individuals are slotted into either one of two dominant regimes of gender installation. This occurs at (at least) five levels that operate synergistically:

- (i) differential behavioral conditioning (particularly injunctive gender norms that reward/punish what is construed as sex-appropriate versus sex-inappropriate behavior)
- (ii) imitation; our bias to copy standards that are (gender) common and (gender) prestigious
- (iii) direct teaching (particularly parental teaching)

Two scaffolding levels facilitate and reinforce much of the above:

- (iv) the individual's relation to a historically situated institutional environment (parental leave policies, freely available streaming pornography, sex-segregation of children in school and recreational settings, etc.)
- (v) correspondent inference/bias; this is people's conceptual tendency to interpret gendered behavior (including their own) as resulting from inner, physiological causes rather than as reactions to social expectancies and (i)-(iii) above.

Over time, but surprisingly early, individuals who are similarly subject to one of the two dominant installation regimes produced by (i)-(v) come to exemplify, probabilistically, similar characteristic properties. They gain a participatory relation to a real, historical gender kind, thereby becoming reproductions of those who were previously subject to those very installations; they are made reproductions of ancestral men or women. On moral grounds, we might want more kinds of installation regimes beyond the dominant binary, changed regimes, or no regimes at all. Nonetheless, these are the ones that we have now and have had historically. Redesigning, changing, or eliminating real gender kinds—manipulating their underlying causal historical mechanisms—requires first understanding them for what they are (Bach 2019a). And that requires, per our earlier discussion, the social coordination of focused rather than muddled investigative reference to those kinds (Bach 2022).

It is important to observe that, consistent with themes from Section 2, there is often a striking lack of comprehension and intentional control with respect to the operation of these installation regimes. Individuals (indeed institutions) can successfully follow a rule with gender content while having little understanding of what explains that rule, why they are following it, and what it means. Such gender-related ‘competencies without comprehension’ (Dennett 2017) are especially likely to develop in reference to behavioral dispositions that resulted from mechanisms (i) and (ii) above. When the young boy on the playground competently exhibits tough-guy behavior, this is a causal result of that boy’s being historically awarded for similar behavior and punished for the contrary. Or it causally emerges from his copying the behavior of prestigious or common boys (see Richerson and Boyd 2005 on prestige bias and conformity bias). In both cases, the boy need not understand why he is behaving the way that he does. He doesn’t need to understand the historical purpose of his behavior any more than he needs to understand the historical purpose of his eye-blinking, salivating, or patellar reflex behaviors.

## 4 Beauvoir and the Social Coordination of Reference to Real Gender Kinds

We should view the conceptual scheme deployed by Beauvoir in *TSS* as regulating causal connections (SP-7) between the research community and the real gender kinds just discussed, thereby promoting epistemic and interventional achievement toward those kinds (SP-6, SP-10). Before defending this claim in relation to the text of *TSS*, I address several tempting but shortsighted arguments against the assimilation of *TSS* to the naturalistic epistemology and ontology from Sections 2 and 3.

The critic will point out that over the 800 pages of *TSS* Beauvoir does not once employ the terms ‘gender’ or ‘gendered.’ It is a stretch, they continue, to hold that Beauvoir is coordinating investigative reference to contemporary gender kinds. This argument fails because it neglects that investigators can refer successfully to real gender kinds, corraling others towards them in ways that improve our capacity to predict and manipulate them, regardless of whether they declared at some mythological naming ceremony ‘I hereby dub this *gender!*’ (SP-4), and regardless of whether they fully understand the nature of those kinds (SP-8). Besides, and as I discuss below, Beauvoir did understand those natures rather well, even if later terminological introductions and modifications, for example the introduction of the terms ‘gender’ and ‘gendered,’ achieved even more focused investigative reference.

One might also object that because much of *TSS* proceeds through the categories of phenomenology and existentialist ethics—‘immanence,’ ‘transcendence,’ ‘the other,’ ‘destiny,’ ‘freedom’ (etc.)—it is implausible that *TSS*’s achievements stem

from its identification of the real kinds to which contemporary scientific research programs refer. In response, I do not think we should dismiss the possibility that some of these terms have scientific referents. Indeed, and as I sketch below, there are reasons to believe that Beauvoir's employments of 'the other' and 'immanence' coordinate reference to the same causal patterns that are identified by contemporary empirical research programs (e.g., Roberts and Fredrikson's Objectification Theory). It is further likely (but I will not argue the point here) that some of Beauvoir's employments of the term 'destiny' coordinate reference to the empirical category *etiological function*, where this is understood in the context of research programs into cultural, not biological, evolution (Bach 2012; Buller 1999).

The critic might dig in here and object that a Sartrean concept of unconstrained subjectivity and freedom, which appears to underwrite several of the existentialist ethical themes of *TSS* (e.g., 16), cannot be squared with a materialist, scientific ontology. In reply, I will flag that there is significant textual evidence in *TSS* that Beauvoir, even if not always consistent on this point, rejects a strong voluntarist and dualist conception of the human subject. Indeed, an important and emerging theme of *TSS*—the influence of which would later soften Sartre's own conception of freedom (Simons 1986)—is the extent to which a person's concrete, historical, and social situation limits their freedom and practical possibilities.<sup>14</sup> Now, even if *TSS* had consistently and explicitly appealed to a radically free subjectivity, this would not by itself undermine my claim about *TSS* causally regulating reference to real gender kinds. Per SP-8, one can successfully identify and track a real kind without fully understanding *how* one is doing so. A science-guided ontology like the one on offer should be willing to recognize the possibility that some of Beauvoir's categories might function as disposable scaffolding—as culling mechanisms for Beauvoir that were valuable in the context of discovery but not the context of justification, making salient for Beauvoir *other* categories (see below) that do causally regulate reference to real kinds.

This leads directly to a third objection, which states that Beauvoir's frequent evidential appeal in *TSS* to diaries and novels is hardly scientific methodology. It is no surprise, this objection continues, that contemporary science has shown many of *TSS*'s sweeping empirical generalizations to be false. While apt, these observations do not weigh against the framing on offer. First, no one should expect the corpus of social scientific knowledge of the 1930's to match that of the 2030's, particularly with respect to gender. The empirical generalizations that Beauvoir derived from the psychoanalytic theory of the time—for example her erroneous claim that women's excessive vomiting during pregnancy results from the psychic resentment

---

<sup>14</sup> Along these lines, see especially Kruks 1990.



of the fetus (*TSS*, 539–43)—are especially dubious in this respect.<sup>15</sup> What is perhaps more surprising is how many of Beauvoir's empirical generalizations anticipated, informed, and were vindicated by (often in ways that are uncredited) the successes of subsequent empirical research programs (see below).

As to Beauvoir's methodology, the chapters of Volume I of *TSS* demonstrate a clear *unifying* approach to disparate bodies of scientific research, revealing how the light thrown from different investigative angles (history, biology, sociology, psychology) converge to illuminate women's and men's 'concrete situation' and 'character.' This is a nice example of resolving 'redundant' reference, which is one way of focusing social scientific reference (Bach 2022). Still, one cannot read the entirety of the unabridged *TSS* and not be struck by Beauvoir's reliance on the diaries of Sophia Tolstoy and Marie Bashkirtseff and the novels of Collete. Does such reliance undermine a naturalistic framing of *TSS*? The answer must be 'no'. During the nascent stages of any empirical research program (certainly the case for the science of gender at the time of the writing of *TSS*), there are few causal regulating mechanisms (detection instruments, measuring techniques, experimental designs, etc.) available to link investigators and real kinds. One has to make do with what one can find, and one has to construct one's own tools.<sup>16</sup> Ostension, explicit definition, *expert testimony*—these are all additional causal regulating mechanisms that might funnel (or might not) the community of investigators towards explanatorily valuable real kinds. Beauvoir had reason to think that the observations and experiences of Tolstoy, Bashkirtseff, and Collete, if properly culled, packaged, and redirected, were such causal regulating mechanisms. The extent to which Beauvoir's resulting categories and analyses resonate in contemporary empirical research programs on gender suggests that she was correct.

We are now in better position to support textually my claim that the epistemic achievements of *TSS* should be understood in reference to the epistemological and ontological frameworks from Sections 2 and 3.

#### 4.1 Women and Men as Natural, or Real, Historical Kinds

In Section 3, I indicated why women and men form real kinds, and I explained in reference to the schema from Section 2 the importance of this fact for the possibility of scientific knowledge about gender. The fervor with which Beauvoir offers

---

<sup>15</sup> See Simpson et al. 2001 for discussion of the complex biological, as opposed to psychological, causes of Hyperemesis Gravidarum. See Munch 2002 for a discussion of how cultural gender bias gave rise to the view that Hyperemesis Gravidarum was rooted in a psychiatric disturbance.

<sup>16</sup> Boyd's 1979 discussion of the scientific value of metaphor is also relevant here.

population-level generalizations about women and men throughout *TSS*, together with the causal explanations in which Beauvoir grounds these generalizations, indicate that Beauvoir was engaged in the general type of epistemic project explicated in Sections 2 and 3.

By leveraging the explanatory and predictive power of real kinds, Beauvoir was not compelled to investigate each woman, girl, man, and boy. She will “center this study on France, where the situation is typical” (*TSS*, 89 fn. 11; see also 112). We have already discussed Beauvoir’s selective appeals to Tolstoy, Bashkirtseff, and Collete. Generalizing from these cases is epistemically warranted if they and women probabilistically share likenesses for the same reason—if they comprise a real kind.

Beauvoir’s inductive strategy here has led to the apt criticism that her analysis is overly narrow, neglecting women in material and demographic positions quite different from Sophia Tolstoy’s or her own. There is much to discuss here, but I will limit myself to two observations.<sup>17</sup> First, there is precedent in the biological sciences for how the natural kind-driven epistemological project from Section 2 is compatible with metaphysical diversity. There are over 15,000 species and 700 genera of the jewel beetle. A researcher can perform crucial epistemic work establishing causal mechanisms that coordinate reference to one or several of these genera while not taking on the important and additional task of coordinating reference to all 15,000 species. Indeed, the success of the latter epistemic projects will often benefit from the prior success of the former projects. Second, there are structural features of women’s (and men’s) situation that, given persisting historical and conditioning factors, generalize broadly. Later I will discuss two such features in relation to *TSS*: self-objectification (and objectification) and double-binds.

Members of a real kind, whether a gender or meteorological or chemical kind, exhibit a suite of characteristic properties for the same underlying reason. Beauvoir did not require the 52,953 studies indexed in the PyscINFO search to observe that characteristic differences between men and women “exist in a strikingly obvious way” (*TSS*, 4). As we will discuss in the next section, Beauvoir understood most of these differences as deriving from historically situated (*TSS*, 753) and socially imposed causal mechanisms rather than biological mechanisms.

## 4.2 The Deflation of Biological Sex Kinds and Historical Gender Kinds

Throughout *TSS* Beauvoir distinguishes property clusters that are causally maintained by physiology and biology from those that are maintained by externally

---

<sup>17</sup> I discuss some of the intersecting relationships between real kinds in Bach 2022; 2012. See also Khalidi 2013.

imposed cultural forces like those sketched in (i)-(v) in Section 3. She writes that “women cannot simply be considered a sexed organism” (*TSS*, 62) and that characteristic behaviors “are not dictated to woman by her hormones or predestined in her brain’s compartments” (*TSS*, 638). The characteristic behaviors derive instead from her “situation . . . her economic, social, and historical conditioning as a whole” (*ibid*; see also: 3, 294, 654, 661, 750, 753–4, 760–1, 765). Beauvoir’s chapters *Childhood* and *The Girl* document the cultural conditioning mechanisms through which young girls and boys are made to become members of the respective social kinds, and Part Two of Volume II provides an encyclopedic account of the properties that probabilistically cohere for individuals as a result of their membership in these social kinds. Individual’s participation in a biologically defined kind persists and maintains causal relevance, particularly in cueing the (i)-(v) cultural mechanisms of gender installation (see, e.g., the discussion of correspondent inference below). Nonetheless, it is the cultural mechanisms themselves and not their (now) contingent triggers that primarily causally explain the shared characteristic (gender) properties.<sup>18</sup>

### 4.3 The Causal Role of Biology in the History of Gender Installation

In addition to cleaving the biological from the cultural kind—a clear example of focusing reference (SP-10)—Beauvoir explains the historical, causal relationship between these kinds. As Beauvoir documents in Volume I, the transition from moderately egalitarian relations between males and females in primitive societies to the subjugation of women in developing and agricultural societies is underwritten by an interaction between biological differences in males and females, on the one hand, and technological and economic developments, on the other.<sup>19</sup> The relevant biological differences, which Beauvoir terms “the physiological given” (*TSS*, 46), include different roles in reproduction (females’ “subjugation to the species”) and differences in physical strength (*TSS*, 75, 136, 523, 735). These differences then interact with technological changes, particularly those connected to the development of farming like the invention of the plough, to explain how the cultural mechanisms responsible for gender installation were first established.

---

<sup>18</sup> For reasons discussed in Section 3, this observation does not entail that the empirical project of disentangling biological and social causal explanations for a given behavioral disposition is straightforward. As suggested there and in fn. 12, it is precisely an individual’s simultaneous participation in a multitude of natural kinds that accounts for the exception-prone quality of social scientific generalizations.

<sup>19</sup> Here Beauvoir references Engels but also suggests that Engels’s explanation is explanatorily incomplete.

The importance that Beauvoir attributes to biological factors in explaining how differences between men's and women's concrete situation developed resonates strongly with several contemporary research programs and especially Wood and Eagly's (2012) empirically informed *Biosocial Constructionist* account. Like Wood and Eagly, Beauvoir rejects nativist explanations of gender differences (for example those now offered by evolutionary psychologists), while also rejecting views that underestimate or dismiss the importance of sexual differences for explaining the origin of gender differences.

#### 4.4 Historical Gender Kind-Identity Over Time: Gender Gone Rogue

Even supposing that historical technological conditions rationalized a gender-based distribution of labor, contemporary conditions no longer provide such grounding. And yet, the division of labor and behavioral differences that originated in the historical conditions continue to obtain in important respects. Beauvoir points to this incongruity throughout *TSS*. She notes that:

from ancient Greece to today ... [woman's] condition has remained the same throughout superficial changes. (*TSS*, 638)

what determines women's present situation is the stubborn survival of the most ancient traditions in the new emerging civilization. (*TSS*, 155)

Beauvoir further discusses how specific structural inequalities between men and women persist even when successive generations transition to economies and technologies that no longer advantage male bodies (*TSS*, 112, 133, 155, 522, 622, 758).

Again, Beauvoir's discussions here direct the reader to causal structures that contemporary political scientists and economists would go on to measure with greater precision. The research of Alesina, Giuliano, and Nunn (2013), which appeals to a dataset that covers 1,267 ethnic groups, is especially noteworthy here. These data indicate that a culture's historical use of plough technology (which depended on its historical soil conditions) correlates with its *present-day* gender roles and attitudes about gender.

Two causal mechanisms help explain this persistence of gender content and hence gender kind-identity over time, both of which were anticipated by Beauvoir in *TSS*. The first is the causal relationship between the labor market, household-level bargaining power, and norms for socializing children. To observe this dynamic, investigators must juxtapose macro-level economic conditions (e.g., farming conditions that differentially benefit male upper body strength) and micro conditions (e.g., resulting household-level differences in the bargaining power of men and women). In the context of contemporary social scientific research, such

modeling is ambitious and unusual, but Iversen and Rosenbluth (2010) are a helpful exception. As they report:

The bargaining power of males in agrarian societies translates into norms as parents socialize their children to make the best use of opportunities available to them ... Where economic efficiency gives males a bargaining advantage on account of greater mobility of their human capital from a gendered division of labor, families do best by socializing a daughter to cultivate the femininity that will help her win her a good man and the docility that will help her keep him. (33)

*TSS*, clearly ambitious in its own right, paved the way for such micro-macro modeling. Beauvoir describes repeatedly in *TSS* the greater bargaining power of men in a marriage (*TSS*, 87, 758), how this stems from general economic and institutional conditions, and how this dynamic incentivizes families and parents to condition and instruct girls to assume historical gender roles (*TSS*, 155, 522, 560, 622). As observed by Beauvoir:

everything still encourages the girl to expect fortune and happiness from a ‘Prince Charming’ instead of attempting the difficult and uncertain conquest alone. For example, she can hope to attain a higher caste through him, a miracle her whole life’s work will not bring her. But such a hope is harmful because it divides her strength and interests; this split is perhaps the most serious handicap for woman. Parents still raise their daughters for marriage rather than promoting their personal development; and the daughter sees so many advantages that she desires it herself. (155)

Once established, these norms endure outside the macro conditions in which they originated (Giuliano 2018).

A second important causal factor that explains the historical persistence of gender kinds is the pervasive conceptual error by which people interpret someone’s characteristic gender behavior as caused by inner, physiological properties rather than by social conditioning or in response to social expectancies. This ‘correspondent inference,’ as it is termed by contemporary social scientists, essentializes (in the biological sense) gender differences in behavior, thus facilitating the cultural transmission of gender norms that sustain those differences through time (Wood and Eagly 2012, 70). Beauvoir references and explicates the causal power of this correspondent inference throughout *TSS* (e.g., 293–4, 341, 738), making clear the advantages that this bias confers to those who benefit from the status quo (e.g., *TSS* 268).

Returning to the model sketched in Section 3, the upshot is this: once gender installation regimes are up and running and have deepened their root systems, they no longer require the biologically informed bargaining conditions that once rationalized particular divisions of labor. When this happens, we can say that the

gender content that continues to be downloaded into the minds of contemporary sexed bodies has gone ‘rogue’ (in the sense of Richerson and Boyd 2005).

#### 4.5 The Importance of Natural (Real) Gender Kinds for Political Change

We just discussed the stability over time for real historical gender kinds. But as is true of other historical real kinds, gender kinds lack the sort of stability (*TSS*, 554) and crisp borders best exemplified by chemical kinds. An important reason for such instability and vagueness is the *mutability* of historical kinds: their capacity to change over time while retaining their kind-identity.

Our best model for the compatibility of mutability and kind-identity over time is biological species. In Bach (2012), I argued on both empirical and political grounds that real gender kinds are mutable in a way that is analogous to species—a proposal that contrasted sharply with Haslanger’s norm-driven and immutable account of gender (according to which women are subordinated by definition and men are privileged by definition). *TSS* reveals that Beauvoir also viewed gender kinds as mutable. We are told that “the free woman is just being born” (*TSS*, 751; see also 723, 761). Indeed, an important observation in Volume II of *TSS* (664, 737, 761) is that meaningful political change with respect to women’s and men’s concrete situations requires revolt at the group rather than individual level, the latter leading to unfruitful patterns like the mystic and narcissist. Identifying, understanding, and acting on the basis of the *real kind status* of women and men thus becomes a requirement for designing a successful politics.<sup>20</sup>

#### 4.6 Two Important Sub-clusters of Characteristic Gender Properties: Self-Objectification and Double Binds

While mutable, gender kinds can be stubbornly stagnant (England 2010). Above, we sketched two mechanisms that help explain such stagnancy. Here, I highlight two subclusters of characteristic properties for gender kinds that have persisted through time: the property clusters associated with self-objectification and double-binds. These are property clusters to which Beauvoir coordinates reference throughout *TSS*, setting the stage for future reference-focusing research programs.

Beauvoir frequently describes the causal relationship between an objectifying social environment that treats (rewards, punishes, etc.) girls and women as bodies rather than as agents, on the one hand, and the onset of self-objectification in which

---

<sup>20</sup> See also Bach 2012, Sect. VI. B. 2.

one begins to understand and treat oneself as an object of appearance, on the other. For example:

The little girl feels that her body is escaping her; that it is no longer the clear expression of her individuality; it becomes foreign to her; and at the same moment, she is grasped by others as a thing. (TSS, 321)

She becomes an object; and she grasps herself as object; she is surprised to discover this new aspect of her being; it seems to her that she has been doubled; instead of coinciding exactly with her self, here she is existing *outside* of her self. (TSS, 349)

The situation for men, given the absence of that objectifying environment, is quite different:

At eighteen, T.E Lawrence went on a grand tour through France by bicycle ... this is how an individual in the headiness of freedom and discovery learns to look at the entire world as his fief. (TSS, 749)

For the girl, were she even permitted such a trip, it is “eyes everywhere, hands waiting,” the concern over which “rivets her to the ground and to self” (ibid).

Fredrickson and Roberts’s (1997) Objectification Theory framework is a nice example of a contemporary development in the causal regulation of reference that grew out of Beauvoir’s referential achievements in *TSS*. Through an array of correlational, experimental, and survey studies, these researchers identify with greater precision the characteristic mental and bodily harms caused by self-objectification. These range from reduced capacity for sustained concentration to increased prevalence of anxiety and eating disorders. Beauvoir described many of these traits as well, often flagging their causal basis in the dynamic between objectification and self-objectification (see, e.g., *TSS* 295, 572, 575, 579, 585, 591–592, 724). Beauvoir even provides a remarkable and early discussion of what we now term stereotype threat (*TSS*, 738–41).

Another subcluster of characteristic gender properties are those that pertain to the double-binds (in the sense of Frye 1983) to which women more than men are consigned. These are situations in which the gender installation mechanisms from Section 3 establish mutually inconsistent behavioral expectations. Often enough, these succeed at installing in an individual behavioral dispositions that are at cross purposes; for that individual there is gender-related censure no matter what they do.

Over and over, Beauvoir alerts us to the straight-jacketing effect of these binds (*TSS*, 121, 151, 273, 329, 346, 567, 569, 580, 722–3, 735, 737). Here she paves the way for a considerable amount of empirical scholarship on structural and intersectional oppression. Beauvoir is also clear that these binds generally obtain for women and

girls but not boys and men (TSS, 294, 443, 484, 723), underscoring the type of persisting gender differences that I have claimed characterize real gender kinds through time:

A young man's venture into existence is relatively easy, as his vocations of human being and male are not contradictory ... For the girl, on the contrary, there is a divorce between her properly human condition and her feminine vocation. (TSS, 348)

For her, these two destinies are not reconcilable; she hesitates between them without being exactly suited to either ... For man, there is no hiatus between public and private life ... ; human and vital characteristics are merged in him. (TSS, 273)

Nor, I submit, should we be unwilling to examine a function-based or etiological understanding of installed gender content that is at cross-purposes (see Bach 2012, 2022). As mentioned earlier, it is an interesting question whether some of Beauvoir's appeals to 'destiny' reduce to a functional understanding, where functions themselves reduce to histories of (cultural) replication with selective retention.

## 5 Conclusions

Successful intervention and humane social planning require now more than ever epistemic and taxonomic deference to the objective reality of real gender kinds as these kinds are revealed through open-ended empirical investigation. We should be wary of proposals that defer to the meanings of terms that we associate with gender, and we should be wary of proposals staked on politically motivated frameworks that prejudice the empirical trajectories and possibilities of real, objective gender kinds.

Beauvoir's *The Second Sex* represents a significant and early contribution to this scientific project of empirically identifying and tracking over time real gender kinds. It directed contemporary social scientists to morally important clusters of characteristic gender properties and also their underlying causal and historical mechanisms. To redesign gender for the better, we would do well to return to *The Second Sex* and continue Beauvoir's project of aligning our categories with nature's real gender kinds.

## References

- Alcoff, L. 1988. "Cultural Feminism Versus Post-structuralism: The Identity Crisis in Feminist Theory." *Signs: Journal of women in culture and society* 13 (3): 405–36.
- Alesina, A., P. Giuliano, and N. Nunn. 2013. "On the Origins of Gender Roles: Women and the Plough." *Quarterly Journal of Economics* 128 (2): 469–530.



- Bach, T. 2012. "Gender is a Natural Kind with a Historical Essence." *Ethics* 122 (2): 231–72.
- Bach, T. 2016. "Social Categories are Natural Kinds, Not Objective Types (and why it Matters Politically)." *Journal of Social Ontology* 2 (2): 177–201.
- Bach, T. 2019a. "Real Kinds in Real Time: On Responsible Social Modeling." *The Monist* 102 (2): 236–58.
- Bach, T. 2019b. "In Defence of Armchair Expertise." *Theoria* 85 (5): 350–82.
- Bach, T. 2022. "Same-Tracking Real Kinds in the Social Sciences." *Synthese* 200 (2): 118.
- Beauvoir, S. 2011. *The Second Sex*. Translated by Constance Borde, and Sheila Malovany-Chevallier. New York: First Vintage Books.
- Blakemore, J. Owen, S. A. Berenbaum, and L. S. Liben. 2009. *Gender Development*. New York: Psychology Press.
- Boyd, R. 1979. "Metaphor and Theory Change: What is "Metaphor" a Metaphor for?" In *Metaphor and Thought*, edited by A. Ortony, 356–408. Cambridge: Cambridge University Press.
- Boyd, R. 1989. "What Realism Implies and what it Does Not." *Dialectica* 43 (1–2): 5–29.
- Boyd, R. 1999. "Kinds, Complexity and Multiple Realization: Comments on Millikan's "Historical Kinds and the Special Sciences"." *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 95 (1/2): 67–98.
- Boyd, R. 2021. "Rethinking Natural Kinds, Reference and Truth: Towards More Correspondence with Reality, Not Less." *Synthese* 198, Suppl. 12: 2863–903.
- Buller, D. J., ed. 1999. *Function, Selection, and Design*. Albany: SUNY Press.
- Byrne, A. 2020. "Are Women Adult Human Females?" *Philosophical Studies* 177 (12): 3783–803.
- Cosker-Rowland, R. 2023. "Recent Work on Gender Identity and Gender." *Analysis* anad027. <https://doi.org/10.1093/analys/anad027>.
- Davis, M. S. 1971. "That's Interesting! Towards a Phenomenology of Sociology and a Sociology of Phenomenology." *Philosophy of the Social Sciences* 1 (2): 309–44.
- Dawes, R. M. 1994. *House of Cards: Psychology and Psychotherapy Built upon Myth*. New York: The Free Press.
- Dennett, D. 2017. *From Bacteria to Bach and Back: The Evolution of Minds*. New York: WW Norton & Company.
- Devitt, M., and K. Sterelny. 1999. *Language and Reality: An Introduction to the Philosophy of Language*. Cambridge: MIT Press.
- Diaz-Leon, E. 2016. "Woman as a Politically Significant Term: A Solution to the Puzzle." *Hypatia* 31 (2): 245–58.
- Elder, C. L. 1995. "A Different Kind of Natural Kind." *Australasian Journal of Philosophy* 73 (4): 516–31.
- England, P. 2010. "The Gender Revolution: Uneven and Stalled." *Gender & Society* 24 (2): 149–66.
- Field, H. 1973. "Theory Change and the Indeterminacy of Reference." *The Journal of Philosophy* 70 (14): 462–81.
- Fredrickson, B. L., and T. Roberts. 1997. "Objectification Theory: Toward Understanding Women's Lived Experiences and Mental Health Risks." *Psychology of Women Quarterly* 21 (2): 173–206.
- Frye, M. 1983. *Politics of Reality: Essays in Feminist Theory*. New York: Crossing Press.
- Fuss, D. 1989. *Essentially Speaking: Feminism, Nature and Difference*. New York: Routledge.
- Godman, M. 2020. *The Epistemology and Morality of Human Kinds*. London: Routledge.
- Giuliano, P. 2018. "Gender: An Historical Perspective." In *The Oxford Handbook of Women and the Economy*, edited by S. L. Averett, L. M. Argys, and S. D. Hoffman, 645–71. New York: Oxford University Press.
- Griffiths, P. 1997. *What Emotions Really Are: The Problem of Psychological Categories*. Chicago: Chicago University Press.

- Haslanger, S. 2000. "Gender and Race: (What) are They? (What) Do We Want Them to Be?" *Noûs* 34 (1): 31–55.
- Iversen, T., and F. Rosenbluth. 2010. *Women, Work, and Politics: The Political Economy of Gender Inequality*. New Haven: Yale University Press.
- Jenkins, K. 2016. "Amelioration and Inclusion: Gender Identity and the Concept of Woman." *Ethics* 126 (2): 394–421.
- Jenkins, K. 2023. *Ontology and Oppression: Race, Gender, and Social Reality*. New York: Oxford University Press.
- Khalidi, M. A. 2013. *Natural Categories and Human Kinds: Classification in the Natural and Social Sciences*. Cambridge: Cambridge University Press.
- Kornblith, H. 1995. *Inductive Inference and its Natural Ground: An Essay in Naturalistic Epistemology*. Cambridge: MIT Press.
- Kornblith, H. 2002. *Knowledge and its Place in Nature*. Oxford: Oxford University Press.
- Kruks, S. 1990. *Situation and Human Existence: Freedom, Subjectivity and Society*. London: Unwyn Hyman.
- Ladyman, J., D. Ross, and D. Spurrett. 2007. *Every Thing Must Go: Metaphysics Naturalized*. Oxford: Oxford University Press.
- Laskowski, N. G. 2020. "Moral Constraints on Gender Concepts." *Ethical Theory & Moral Practice* 23 (1): 39–51.
- Lycan, W. G. 2017. "On Evidence in Philosophy." In *Proceedings and Addresses of the American Philosophical Association*, Vol. 91, 102–17. Philadelphia: American Philosophical Association.
- Mallon, R. 2016. *The Construction of Human Kinds*. Oxford: Oxford University Press.
- Mikkola, M. 2016. *The Wrong of Injustice: Dehumanization and its Role in Feminist Philosophy*. New York: Oxford University Press.
- Millikan, R. G. 1999. "Historical Kinds and the "Special Sciences"." *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 95 (1/2): 45–65.
- Millikan, R. G. 2000. *On Clear and Confused Ideas: An Essay about Substance Concepts*. Cambridge: Cambridge University Press.
- Millikan, R. G. 2001. "Cutting Philosophy of Language Down to Size." *Royal Institute of Philosophy Supplement* 48: 125–40.
- Millikan, R. G. 2005. *Language: A Biological Model*. Oxford: Oxford University Press.
- Millikan, R. G. 2010. "On Knowing the Meaning; with a Coda on Swampman." *Mind* 119 (473): 43-81.
- Millikan, R. G. 2012. "Accidents." In *Proceedings and Addresses of the American Philosophical Association*, Vol. 86, 92–103. Philadelphia: American Philosophical Association.
- Millikan, R. G. 2017. *Beyond Concepts: Unicepts, Language, and Natural Information*. Oxford: Oxford University Press.
- Money, J. 1973. "Gender Role, Gender Identity, Core Gender Identity: Usage and Definition of Terms." *The Journal of the American Academy of Psychoanalysis* 1 (4): 397–402.
- Munch, S. 2002. "Chicken or the Egg? The Biological—Psychological Controversy Surrounding Hyperemesis Gravidarum." *Social Science & Medicine* 55 (7): 1267–78.
- Oakley, A. 1972. *Sex, Gender and Society*. London: Temple Smith.
- Richerson, P. J., and R. Boyd. 2005. *Not by Genes Alone: How Culture Transformed Human Evolution*. Chicago: University of Chicago Press.
- Rubin, G. 1975. "The Traffic in Women: Notes on the Political Economy of Sex." In *Toward an Anthropology of Women*, edited by Rayna Reiter, 157–210. New York: Monthly Review.
- Simpson, S. W., T. M. Goodwin, S. B. Robins, A. A. Rizzo, R. A. Howes, D. K. Buckwalter, and J. G. Buckwalter. 2001. "Psychological Factors and Hyperemesis Gravidarum." *Journal of Women's Health and Gender-Based Medicine* 10 (5): 471–7.

- Spelman, E. V. 1988. *Inessential Woman: Problems of Exclusion in Feminist Thought*. Boston: Beacon.
- Simons, M. A. 1986. "Beauvoir and Sartre: The Philosophical Relationship." *Yale French Studies* 72: 165–79.
- Stock, K. 2023. "Is Womanhood a Social Fact?" In *Sex and Gender: A Contemporary Reader*, 51–68. London: Routledge.
- Stoljar, N. 1995. "Essence, Identity, and the Concept of Woman." *Philosophical Topics* 23 (2): 261–93.
- Thomasson, A. 2007. *Ordinary Objects*. Oxford: Oxford University Press.
- Wilson, E. O. 1992. *The Diversity of Life*. Cambridge: Harvard University Press.
- Wood, W., and A. H. Eagly. 2012. "Biosocial Construction of Sex Differences and Similarities in Behavior." In *Advances in Experimental Social Psychology*, Vol. 46, 55–123. San Diego: Academic Press.
- Young, I. M. 1994. "Gender as Seriality: Thinking about Women as a Social Collective." *Social Postmodernism: Beyond Identity Politics* 19 (3): 713–38.