Title
Ordinalization

Journal
Sociological Theory, 34(3)

ISSN
0735-2751

Author
Fourcade, Marion

Publication Date
2016-09-01

DOI
10.1177/0735275116665876

Peer reviewed

Original Article

AMERICAN SOCIOLOGICAL ASSOCIATION

Sociological Theory
2016, Vol. 34(3) 175–195

DOI: 10.1177/0735275116665876
stx.sagepub.com
SAGE

Ordinalization: Lewis A. Coser Memorial Award for Theoretical Agenda Setting 2014

Marion Fourcade[1]

Abstract

We can think of three basic principles of classificatory judgment for comparing things and people. I call these judgments *nominal* (oriented to essence), *cardinal* (oriented to quantities), and *ordinal* (oriented to relative positions). Most social orders throughout history are organized around the intersection of these different types. In line with the ideals of political liberalism, however, democratic societies have developed an arsenal of institutions to untangle nominal and ordinal judgments in various domains of social life. In doing so, I suggest, they have contributed to the parallel amplification of both. In this article, I specifically discuss the socio-technical channels through which ordinal judgments are now elaborated, a process I call *ordinalization*. I conclude by exploring the political and economic possibilities of a society in which ordinal processes are ubiquitous.

Keywords

social theory, hierarchy, categories, classification

How do we know what we know? Quite simply—we learned it. As children, we absorbed the world and made it our own. We acquired words, concepts, and behaviors readily supplied by our social environment, sometimes forcibly, sometimes imperceptibly. Our sense of time and space, our perception of differences and similarities, our feelings about right and wrong, our deepest and most private emotions all came more or less naturally, more or less painfully, but always mediated by the efficacious power of language, our affectively charged interactions with others, and the demands of institutions. Our bodies were trained in the process too. So we came to recognize and experience certain physical sensations, instinctively feel pleasure or revulsion, in ways that are, broadly speaking, adjusted to our immediate social world.

First and foremost, we learned to split, lump together, and assign things and people, including ourselves, to categorical schemas passed on to us as what Alfred Schutz (1972) called "commonsense." This ability to classify, we sociologists hold, is both a product of

[1]University of California, Berkeley, Berkeley, CA, USA

Corresponding Author:
Marion Fourcade, UC Berkeley, Barrows Hall 410, Berkeley, CA 94720-1980, USA.
Email: fourcade@berkeley.edu

human communication and an essential basis of social community. Émile Durkheim (1995; Durkheim and Mauss 1963) forcefully argued that any form of conceptual thinking has its roots in social life and social "morphology." Human beings categorize the social and physical world, and they sustain their being through these divisions. The most basic forms of categorization include the divisions between insiders and outsiders, pure and impure, profane and sacred. What gives categories their authority is indeed the fact that they are *collectively* crafted, sustained, and enforced and as a result, hardwired into our (naturalized) social world. Through the collective enforcement process, categories and the classification systems that sustain them, acquire an emotional or cathectic dimension, along with subtle stamps of appreciation (or depreciation, depending on the nature of their social entanglements). They bind us to one another and to objects around us, but also separate us. How they do so is the subject of this lecture.

THREE TYPES OF CLASSIFICATORY JUDGMENTS

We can think of three basic logical principles of classificatory judgment for comparing things and especially people.[1] Taking direct inspiration from mathematics, I will call these principles *nominal*, *cardinal*, and *ordinal*. In the following, I define them as ideal-types before examining how they work in practice.

Nominal Judgments Are Oriented to Essence

They define what things (or people) are. We may refer to them as judgments of "type," purporting to describe some intrinsic character and relation: "that kind of." A good example of the nominal logic is the flourish of taxonomic activity that came about with the rise of the biological sciences, particularly botany and zoology, in the eighteenth century (Schiebinger 1993). Conventionally traced back to the publication of the first edition of Carl Linnaeus's *Systema Naturae* in 1735, the inventory and classification effort applied to plants, animals, and human beings. Specimens were collected all over the world and carefully organized in relation to other specimens, following rules of resemblance or difference. The nonbiological aspects of human experience were subject to the same omnivorous collecting too. By the end of the nineteenth century, the accumulation of human artifacts and knowledge of exotic languages and rituals allowed for the ostensibly scientific definition of cultural differences between human groups.

The ontology of nominal judgments is qualitative. Practically, it consists in conceptual acts of categorical design (i.e., deciding on the criteria of resemblance) and interpretive acts of categorical fitting (i.e., assessing where the object, or the individual, belongs). Resemblance legitimates the "lumping together" of individuals or things, but what resemblance means, how it should be established, and where it comes from is always the outcome of a contested social process (Ritvo 1997; Zerubavel 1996). Furthermore, the causal logic may even be reversed: As Durkheim and Mauss (1963) have argued, the people and things that social life lumps together *come to be seen* as similar, and those that are separate in practice *come to be seen* as different.

Of course, resemblance *implies* difference too: Lumping things together always "marks out the limit of" an outside or an opposite, even when the latter is not spelled out or obvious (the dominant category or standard is usually unmarked; see Zerubavel 2015). Second, as Geoffrey Bowker and Susan Leigh Star (2000:5) write in *Sorting Things Out*, "each standard and each category valorizes some point of view and silences another." Thus, defining a woman as someone who is born with female genitalia versus someone who performs

femininity has very different social implications. Should a transwoman go to the women's bathrooms or the men's? Or is the exercise and reproduction of binary gender differences, in bathrooms as elsewhere, fundamentally problematic? Should the practice of separating bathrooms simply be done away with? Or should people with nonbinary gender identifications have their own separate bathrooms, opening up the possibility of further partitions? Mundane and larger social struggles abound around the principles through which nominal difference is produced and reproduced.

The more categories are recognized, the more the society is deemed "heterogeneous" (Blau 1977). Expanded to the whole social collectivity, lumping defines a "social topology" of people and things (Zerubavel 1996). A good example is the French *terroir* system—the institutional recognition of geography as a principle of substantive differentiation in wine and foodstuffs. A red wine from the village of Vosne-Romanée will insist on its incommensurability with one from the neighboring commune of Morey-St Denis even though only a few miles separate the two *terroirs* and both wines are made exclusively from *pinot noir*. In keeping with this image, we can think of the pure, ideal-typical nominal topology as a flat and horizontal map: Entities are simply distributed across space without any assumption of hierarchy between them. Of course, the social world is almost never organized that way in practice: Horizontal difference functions most of the time as a social fiction, which helps sustain all kinds of unequal social orders. In spite of its democratic-republican roots, the *terroir* system is heavily hierarchized, between those who have a rightful claim to *terroir* and those who don't, and also across *terroirs* (Fourcade 2012). And of course the image of a segregated but horizontal distribution of "different kinds of people" was the ideological pretense that sustained the "separate but equal" legal doctrine in the United States and the racial segregation of facilities and institutions.

Cardinal Judgments Are Aggregative and Oriented to Counts

In cardinal judgments, numerical values become meaningful in their own right. Cardinal judgments allow for comparisons but solely in terms of an underlying *number* of elements: The difference is measurable, and its significance can be assessed. The phrase "in 2013, there were roughly 2.13 million marriages in the United States, as opposed to slightly less than 2.12 million in 2012" contains a cardinal statement: The difference between the two is 10,000 marriages. Many other population facts—measures of births and deaths, rates of fertility, marriage, or suicide—can be apprehended through a cardinal lens. Of course, Georg Simmel comes to mind, who described the impact of sheer numbers on the experience of social life: Interpersonal dynamics and affect change dramatically when a dyad becomes a triad or when the small group becomes a large one. Closer to us, Stefan Bargheer's (2016a, 2016b) work has shown that there are plenty of domains where numbers as representatives of either "quantity" (accumulation of the same) or "diversity" (accumulation of the different) can be valued as ends in themselves. Bargheer's historical analysis of the valuation of birds in Britain and Germany, for instance, shows that the former setting privileged exoticism and rarity (and thus the diversity of species), while the latter praised usefulness and vitality (and thus the sheer abundance of a particular species).

Cardinal judgments are often associated with practices of collecting and accumulating. A *collection* is generally structured by sheer internal difference, the qualitative dimension (Boltanski and Esquerre 2014). For instance, an entomologist will be typically interested in gathering specimens from as many diverse species of beetles as possible: Here what is measured is the *degree* of diversity, understood as a number. An *accumulation*, by contrast, is about counts only—the quantitative dimension. A pure accumulation consists in a replication of

objects within a class. But many kinds of accumulations are examples of collection too. A stamp or wine collection may be apprehended through the lens of its internal diversity or through an accumulative lens. In that case, what matters is the overall size and value of the collection, measured in numbers of bottles, stamps, or even in corresponding counts of money. There are many different ways to aggregate.

Ordinal Judgments Are Oriented to Relative Positions According to a Stable Rank-ordering Criterion

In contrast with the horizontal maps evoked by nominal judgments, ordinal ones typically operate according to a vertical polarity of relative positions on an "up versus down" scale (Schwartz 1981). In some ways, the conceptual distinction between nominality and ordinality is also a variation on the terminology used by Peter Blau (1977), who contrasts social differentiation through nominal parameters, or heterogeneity, with social differentiation through graduated parameters, or "inequality of status."

Unlike mere nominal difference, ordinal relations imply different valuations, a distinction of (at a minimum) two levels, highest and lowest, above and below. In the old Parsonian vocabulary, they are "evaluative." Unlike cardinal judgments, which are focused on magnitudes, ordinal judgments are interested in relative ranks, no matter the size of the difference.

The principles that underlie rankings are sometimes elusive and heavily subjective, making it hard to morally justify outcomes. For instance, usefulness, aesthetics, good, virtue, emotion, efficiency, quality, skill, fame, honor, purity, price, performance may all serve as worth-ordering principles, as various "grammars of morality" in the terminology of Boltanski and Thévenot (1999, 2006).[2] The dilemma is particularly acute in democratic societies to the extent that the equality of treatment they seek to achieve must rely on impersonality and the "leveling of social differences" (Weber 1978:983). Elusive ranking criteria are also inefficient, conflicting with the demands of bureaucracy and capitalism. As a result, modern ordinal judgments often tend toward numerical commensuration (and thus cardinality), which removes the sting of opinion and turns the production of rankings into a seemingly dispassionate exercise of quantification. Ranking is then powered by measurement, whether counts of a trait (in the case of interval scales) or proportions (in the case of ratio scales) (Stevens 1946). For instance, numerically scoring countries on their "transparency" is a means toward producing a rank-ordered hierarchy from the least to the most corrupt nation. The score in this case measures the underlying higher good, indeed often becomes the good itself. Money, of course, occupies a special place here as a particularly efficient instrument of commensuration, trapped between a simple count and a metric with a moral valence of its own (Zelizer 1994). The price of a piece of art, for instance, may be said to measure the piece's relative position according to a logic of fame (of the artist), or aesthetics (the taste of the buyer/critics), or supply and demand (the state of the market at this particular time and place).

INTERSECTIONS

In practice and in the social world, nominal, cardinal, and ordinal judgments almost always overlap. In democratic decision making, for instance, the ranking of choices (ordinal judgment) is typically supposed to flow from processes that are cardinal in essence: The legitimate outcome is what the majority, or the largest number, wants. The intersection between nominality and cardinality provides another illustration. First, the process of

aggregation—which sustains cardinal judgments—supposes agreement on what is to be aggregated and how. In other words, there can be no aggregation without a theory of what the world being aggregated consists of (Johnson-Hanks 2016). Second, aggregations acquire lives and properties of their own as they crystallize into "social facts" (Durkheim 2014). Cardinality is often a powerful argument for the emergence of nominal categories. This matters for politics, for instance: In many countries, political parties may be represented in Parliament if they reach a certain number or percentage of voters.

Or witness the example of Latino activists, who explicitly embraced a cardinal strategy in the 1970s, as Cristina Mora recently reminded me. In their efforts to attract legislators' attention, activists seized on the cardinal malleability of the nominal category as a source of political strength. They claimed, for instance, that the entire population of Puerto Rico should be reclassified as Latino, expanding the category beyond the boundaries of the United States proper in order to create a bigger lump (Mora 2014; Rodriguez-Muñiz 2015). Importantly, the successful cardinal move of Latinos reverberated into the nominal claims of other ethno-racial groups. African Americans, in particular, were not the largest minority anymore. So their political representatives started marking difference in other ways, by emphasizing the intensity of their oppression relative to other minority groups—an ordinal argument—or emphasizing their nationality against the Latinos' presumed foreign origin—a nominal one, but different (Abascal 2015). Today, the social facts about Latino demography are at the center of debates about the changing character of American identity and politics.

We can also look at the intersection between nominality and ordinality. All "historically situated social processes" imply a relation between nominal judgments and ordinal ones, "difference and inequality," as Rogers Brubaker (2015) puts it. In the postface to *Homo Hierarchicus*, French anthropologist Louis Dumont (1980) remarked that even the most binary opposition—between the left hand and the right hand—cannot be thought of as a divide between evenly matched forces, a simple nominal difference. The heterogeneous division is itself a valuation because each hand's relation to the totality of the body is—*of physical necessity*—different, with one being "right" and at ease and the other uncomfortable, "gauche" (which is the French word for left).[3] Difference here is inescapably tied to valuation. This case, of course, is not the exception but the sociological rule: *Vertical* distinctions between *kinds* are endemic to social life, often beginning with very simple us-them divisions, such as claims of self-worth and self-recognition against a polluted outside: "We" are the pure, the nonpolluted. Ian Hacking (2005:114) puts the point bluntly: "The defiling other is a sociological universal."

Even though we live in a world ideologically dominated by the ordinal figure of Homo Equalis, Homo Hierarchicus exists all around. Dumont, who was a student of caste in India, conceptually distinguished stratification, which is a system of relative positions on a *common* scale, operating against a presumed background of equality, from hierarchy, in which relative positions are organized according to a nominal principle but with a fundamental presumption of radical inequality. Homo Hierarchicus sees difference as essential and unbridgeable: There is verticality in the social order, but it is a discontinuous one, organized around the extreme poles (specifically the pure-impure distinction) rather than step-by-step gradations. She thus achieves the paradoxical outcome of striving to assess relative worth through an incommensurable metric.

Truth to tell, much of social life around the world takes place at the intersection between judgments of kind and judgment of worth. Most social orders in history have consisted in an explicit ordering of different kinds of people: Caste, above all, but also race, estate, class, gender, ethnicity, region, citizenship, and territory appear not only as differences but as differences that exist in a hierarchical, that is, an inferior-superior,

relation between kinds: men-women, natives-foreigners, colonizer-colonized, and so on. (Charles Tilly [1998] referred to these as systems of "categorical inequality.") *The convergence between nominality and ordinality is the political dream of a society of orders*: In such a society, the ordinal ranking of individuals rests on the principle of nominal difference. *The political dream of modern democracy (but not necessarily its reality!), however, lies in the separation between nominality and ordinality*: The dynamics of identity may give rise to a proliferation and flourishing of kinds, but these should not be ranked as such. Conversely, individuals may be ordered and stratified but not as kinds. No hierarchy is legitimate that does not rely on the presumption of openness, equality of treatment, and consideration.

DISENTANGLEMENTS

This tension, between "the promises of individualistic liberty" (and in particular the ability to freely perform and experience one's difference) and "the requisites of equality," stands at the heart of liberal political ideology (Brown 1993:400). Danielle Allen (2015:108) reminds us that the U.S. Declaration of Independence conceives political equality, or equal access to the means of government, as "the bedrock of freedom." Reconciling these two imperatives is hard to achieve in practice, however. Andrew Abbott (2015) pointed out in a recent lecture that "contractarian liberalism envisions a society of universal beings without particular qualities, living on the one hand in a public and equal world of politics and on the other in a private, unequal, and deliberately unknown world of social differences, whose implications are sometimes to be remedied." But we might argue that it is precisely because liberalism *does* recognize and embrace the radical particularity of persons that personal characteristics must be relegated to the private side, unless they impinge on the realization of a "public and equal world of politics," in which case they must be publicly addressed. Nominal differences may live and thrive *as long as they are not a principle of social ordering*.

But organized nominal claims, to the extent that they are inextricably linked to ordinal structures through history, always overflow the private realm and assert themselves via the democratic channel. The paradox for liberal states is that they cannot seek to achieve the promise of formal equality of opportunity without making categories and differences part of their vocabulary and institutional action. Historically, democratic societies have oscillated between granting nominal claims (particularly those formulated on the basis of an involuntary classification) some measure of public recognition and authorizing no such claims at all (Starr 1992). The voluntaristic promotion of disadvantaged groups in the name of political equality provides examples of the first path, which I refer to here as the amplification of nominality; blind evaluations, universal mandates, and anti-discrimination laws (banning the use of certain categories in predictive models for instance)[4] provide examples of the second path and sustain the amplification of ordinality. In many ways, these two amplification processes are in tension with one another.

The Amplification of Nominality

Thus, while nominality and ordinality must be disentangled in order to realize the political *ideal* of liberalism, both are simultaneously essential to its performance too. The result is a somewhat paradoxical amplification of each imperative. The patterned, historically constructed specificity of people and things must be recognized; but it must also be suppressed.

In the modern period, nominal difference has reasserted itself in a politics that values the management and protection of kinds, particularly vulnerable or underprivileged ones (ethno-racial or religious minorities, the disabled, women, the poor, the elderly, endangered species, special natural sites). States have played a key role in these struggles as the prime designers of nominal categories and the prime targets of nominality claims, solidified through policy and the law (Bourdieu 2014; Loveman 2014; Mora 2014). Geographical or origin indications; tribal, ethno-racial, or class (U 2016) identifications; the inscription of categories into record-keeping practices; and institutional designs in the distribution of various types of resources and benefits are all part of this process of amplification.

The moral justifications for the amplification of nominality in a democratic society are varied: a politics of *freedom*, embracing difference for itself as an essential ingredient of the good society and a source of mutual enrichment (as in the multicultural ideal, for instance) or a politics of *government*, seeking efficiency and control in the disposition of things and people (Foucault 2010). Because social difference is always entangled with inequality in practice, however, the politics of difference is often a politics of *power* too. And thus democratic societies have also magnified nominal categories, for instance in the name of a politics of *rent*, seeking the maintenance or institutionalization of privilege, theoretically illegitimate in a democratic context but not without actual political purchase in many of them;[5] a politics of *protection*, made in the name of suffering, injury, or loss or to preserve authenticity (Brubaker 2016; Epstein 2007); and a politics of *ressentiment*, characterized by "wounded attachments" between the dominated and the dominant that motivate a "moralizing revenge" on the part of the latter (Brown 1993, 1995).

The amplification of nominality often reintroduces ranking claims in the form of symbolic exclusions, symbolic enhancements, identity claims, and sometimes, special priorities, accommodations, and rights. This *ordinalization of nominality* sometimes emerges *from above* and sometimes *from below*. From above, dominant groups enforce their own cultural standards through the ideological elaboration of the nominal category and its inherent qualities and make claims on institutions on the basis of its supposed superiority. This symbolic work typically rests on the cultivation of a sense of natural quality or distinction, which requires a long, deep process of inculcation and the constant reinforcing of divisions (Bourdieu 1984). Finally, holding on to an ineffable logic of worth often entails a knee-jerk rejection of crass quantification. French wines in the top territorial categories (e.g., *crus classés* in Bordeaux, *grands crus* in Burgundy), for instance, are especially wary of critics' ratings, which can have a big effect on sales and prices.[6]

From below, dominated groups may also seek self-empowerment and emancipation through cultural work. Categorical affiliation, even when involuntary as in the case of race, is the source of "affirmative pleasures," such as partaking in a rich, group-oriented cultural life (Emirbayer and Desmond 2015:17). Claims on organizations and the state provide another channel of affirmation. Many institutions—most prominently educational institutions—have designed policies to make members of disadvantaged groups comparatively more "worthy" to their constituents in an effort to compensate for the lesser consideration they receive from the society at large or to curb the implicit "privilege" still enjoyed by socially dominant groups. These efforts rely on a more proactive view of democracy by enforcing the equality that should have been and embracing the play of differences, framed as "diversity" or "multiculturalism," as a net benefit to society. In practice, they often require stepping away from traditional liberal devices—such as standardized, quantified (and color-blind) assessments (Bonilla-Silva 2003). Nominalization, both from above and from below, thus generally implies suspicion toward basic strategies of commensuration.

The institutionalization of nominality, of course, particularly when it is associated with claims of worth, further accelerates the dynamics of amplification through the "looping" effect identified by Ian Hacking (1995). New nominal descriptions, practices, and ontologies (e.g., medical diagnoses, census classifications, even genomes; Navon and Eyal 2016) produce new subjectivities, new ways of experiencing oneself, which in turn reinforce the power of categories. Looping is how the person comes to fit, to understand herself as being "of a certain kind," or how she finds herself summoned (Tavory 2016) by others into that kind. For those categories that have a positive moral salience especially, or are associated with a tangible benefit, looping will produce an outward expansion of the category. As people are thus "made up," in Hacking's (1985) other felicitous phrase, a social collective acquires a solid state, becomes more of a lump.

Once institutionalized, classifications "have consequences. Some cause damage; some advantage. That is, above all other reasons, why people fight over them" (Starr 1992:274). The rightful use of nominal categories is typically defended or challenged through law and symbolic politics. These institutions police the relative thickness or porosity of boundaries, the meaning of categories, and who is allowed to speak for them (Abbott 1995; Barth 1998; Brubaker 2016; Brubaker and Cooper 2000; Patterson 1977). The history of the French wine-producing regions, for instance, is a history of tremendously acrimonious "classification struggles" (Bourdieu 1984) over the boundaries of *terroir*—the precise geographical territory that is the relevant unit for identifying and selling wine. Agricultural life is riddled with protracted legal battles over who belongs to each geographical area and who does not, who is allowed to label their bottles "Chablis," or "Petit Chablis," or just "Bourgogne." In this eminently human struggle, where the use of a name brings substantial economic advantages,[7] the perimeter of geological strata, the drawing of maps, the type of plants, agricultural and viticultural techniques, the geographical source of grapes, the yield of the vineyard (high yields are suspicious), and the taste of wine have all been at stake. Nominality matters so much here because it is articulated with claims of identity, authenticity, and value. I shall come back to this point.

The Amplification of Ordinality

It is often not well appreciated that the same democratic institutions and processes that make the nominal categories salient are surreptitiously undoing them too. According to another ideal of democratic politics, people must be apprehended outside of any distinctions "in kind." Any interpersonal comparison must be made according to criteria that are shared by all rather than a few.[8] The social lumps of nominality are often associated with unjust practices of exclusion, prejudice, and differential treatment: indeed they have been historically constructed through these practices (Wacquant 1997). Therefore, they must be bypassed and possibly unmade. The lumpy society must be liquefied or sublimated, "in kind" solidarities and ties evaporated. This has three implications: First, some other dimensions must be found that will anchor *homogeneous* interpersonal comparisons without reference to differences in kind; second, if such dimensions cannot be found, they must be *created*; and third, *everyone* must be incorporated into the evaluative scheme for it to be politically valid.

The solution is thus predicated on the ability to commensurate. The end point of the process, the ultimate realization of ordinality's ideal of order, is an infinite vertical splitting—a scale upon which everything and everyone may be accounted for and ranked. The nominal logic of lumping had created solid societies—societies of groups, orders, estates, organizations, communities, with their inside and their outside. Grades and other forms of ranking instead aspire to a society of individuals, complete with the egalitarian promise

of objectivity and blindness to difference. The truly liquid scale contains within itself the assurance that anyone could, in principle, obtain any position along the continuum (by contrast, rigid scales fall back onto a nominal logic, as I suggest in the following). Education is a good example. You can always get more—an extra year, an extra degree. Of course from a sociological point of view, the devil is in that verb, *can*. But the promotion of education as a universal good means that every individual could presumably obtain a place on such a scale.

De-categorization. So the amplification of ordinality, like the amplification of nominality, has a moral function. First, it affirms the liberal democratic ideal. The individualization of positions erases the fixed lumps of society and proposes a more open-ended representation of underlying differences, dissolving them through an ever-finer process of splitting and possibly liquefying them by means of a fully continuous scale. All nominal categories are up for grabs in the new ordinal order. The traditional binaries of sex, gender, and sexual orientation (male/female, masculine/feminine, heterosexual/homosexual) have been diluted by genetics and changing social norms, encouraging those who claim that they belong somewhere in the middle or nowhere at all. Once violently forced into a dimorphic world by surgery and social pressure, intersex persons are increasingly being treated as such by medical establishments in the United States and recognized on bureaucratic forms (Canaday 2009). Furthermore, gender performances, which can vary a lot more than genitalia, have become increasingly central to gender attributions so that "one can find levels of masculinity and femininity in almost every possible permutation" (Fausto-Sterling 2000:22).

Racial categories are arguably not immune to these trends either. To be sure, the chaotic reality of race as a biological trait continues to conflict sharply with its continued existence as a categorical marker in the social world (Brubaker 2015).[9] But recent research offers a useful reminder that racial stratification is more gradational than is commonly thought. Both majority *and* minority groups routinely perform and implement "colorism" (i.e., treat lighter skinned individuals more favorably) (Keith and Herring 1991; Monk 2014). Second, as genetic testing moves into popular culture and commercial business, the gradational concept of "racial admixture" is changing the social reality of race. As Nelson (2016) has shown, it now sustains new forms of identification around bio-geographical ancestry that have the potential to both contest (but also to reaffirm) existing categorical bonds.

De-categorization may take the form of a move from binary classifications to multipolar ones (biologist and gender studies scholar Anne Fausto-Sterling [1993], for instance, argued that "male and female are not enough" and outlined three additional "sexes") or the replacement of nominal distinctions by cardinal or ordinal ones, which presumes a homogeneous criterion of judgment. The substitution of a host of "autism *spectrum* disorders" to the lumpy category of "mental retardation," analyzed by Gil Eyal et al. (2010), offers a good illustration of de-categorization both in terms of diagnostics and public perceptions and in terms of their associated institutional matrices (e.g., we move from the lumpy asylum to the countless, precisely tailored autism therapies). Since the focus is now on fine-grained differences along the spectrum, being positioned *somewhere* on it (rather than in the clear location of a marked category) may be less stigmatizing too. Eyal et al. call this dissolution of the stigma the "moral blender" (p. 3).

What goes for autism goes for many other categories. Back in 1948, Alfred Kinsey and his colleagues (Kinsey, Pomeroy, and Martin [1948] 1998:636–59) had proposed measuring sexuality preference through a rating scale going from exclusively heterosexual (0) to exclusively homosexual (6), with intermediary positions on the scale (1–5) gauging varying desires for each sex and a residual category (X) marking the absence of sexual reaction. Again, the effort was constructed as "morally neutral" and arguably contributed to the destigmatization of homosexuality (Espeland and Michaels 2016): According to Kinsey's calculations, the

"accumulative incidence" of homosexual arousal in his sample was 28 percent for the female subjects and 50 percent for the male ones (Kinsey et al [1953] 1998:474). As he put it:

> The world is not to be divided into sheep and goats. Not all things are black nor all things white. It is a fundamental of taxonomy that nature rarely deals with discrete categories. Only the human mind invents categories and tries to force facts into separate pigeon-holes. The living world is a continuum in each and every one of its aspects. (Kinsey et al. [1948] 1998:639)

If eighteenth-century botanists were obsessed with nominal differences, modern science and societies, powered by the rise of statistical thinking on the one hand and anti-categorical ideologies of self-fashioning and destigmatization on the other, have seen the proliferation of ordinalized or even cardinalized (e.g., when the rank-ordering of individuals is rooted in counts or proportions) systems of classification.

Leveling. As we have seen, the technology that sustains the ordinal restructuring of nominal differences is often quantitative. Measurement reveals knowable features of a person or phenomenon beyond moral preconceptions. Quantification transcends boundaries of kind, collapsing absolute differences into relative ones (Espeland and Stevens 1998). Its intention is inclusive, seeking to encompass the largest population possible: The more comprehensive the scale, the less contestable and the more significant (both metaphorically and statistically). Thus in his wonderful book on the history of the IQ test, John Carson (2007) shows how, in the United States, intelligence became accepted as a seemingly "natural" attribute, a *singular* entity that could be measured through psychological testing in order to rank and classify entire populations. A means of judgment, yes, but one that appears to apply equally to all.

Second, quantification and measurement have an air of neutrality and afford easy communication. For instance, any wine rated 95 of 100 by wine critic Robert Parker should provide the same pleasure to the palate and to the mind—that is, to Robert Parker's, at least. It is reliable, a *standard*, the work of a gustative machine. Numbers expunge personal judgment and affirm a "mechanical" form of objectivity, even in the seemingly most subjective enterprise, the tasting of wine. No matter how sketchy, they provide the illusion of control and the apparent means of rational judgment (Lampland 2010). Parker and his staff, who taste wines blindly and in hotel rooms, unpolluted by personal interactions with vintners, claim detachment and objectivity.

Third, and here I am merely channeling Theodore Porter (1995), numbers detach the "seizing of the world" from the messiness of politics at the same time that they help construct a robust infrastructure for it. This function—cooling down opinion and thus political conflict—is particularly well developed in societies with insecure bureaucratic, political, and intellectual classes, like the United States. Numbers and standards support accountability, and as such, they are the moral language of democracy and anti-elitism (Epstein and Timmermans 2010). America, indeed, loves statistics, surveys, quantitative evaluations, and above all rankings, which proliferate in every domain (Igo 2007). Rankings express the drama of social life in an ideologically egalitarian[10] society, playing and replaying the competition between individuals and the contest between organizations on a *seemingly* leveled playing field (Espeland and Sauder 2007). Rankings have enough stability over time that they do indeed order the world. But they contain enough movement that they can preserve the perception of mobility, the possibility of change. We relish in the rise and fall of people, organizations, and things up and down various types of scales: player statistics, the *Fortune* 500, college rankings, wine ratings. These devices agree with dominant ideologies about the malleability of American society. Perhaps they contribute to perform these ideologies too.

Consider a wine from the French region of Saint-Emilion. The geographical indication is a nominal marker, impossible to reproduce if your grapes do not come from that area. A wine identified as a "95 Parker," on the other hand, upholds the democratic promise: It can come from anywhere—a small upstart winery or an established producer, Saint-Emilion or New Jersey. Moreover, the rating for the same wine may change from year to year. Unlike the *terroir* "mark of origin," it is not a solid privilege or a social status bestowed once and for all. It is a liquid state, perpetually in movement, where people and bottles simply perform or underperform.

Freedom. Ordinalization, then, is fueled by a de-categorizing, leveling, and at least at first sight, morally agnostic ideology. It stems from a radically individualist and anti-elitist philosophy, according to which people make decisions for themselves, free of social influences, and face the consequences. Consider recent transformations in the market for credit services, whereby the nominal boundaries that used to mark exclusion (e.g., gender, race, marital status, neighborhood) are progressively being replaced by the internal rating of the broadest possible range of individuals on one common dimension: the credit score. Like other ordinary scales discussed earlier, the system tends toward universal inclusion. The presumption is one of fluidity: Individuals are expected to move along the scale of their own volition, skill, and resources, not being tied to a category that excludes them from the evaluation process altogether. Indeed, what made behavioral scoring so attractive in the United States (not only in credit but also in digital health or the law) is precisely that it provided a way to evaluate people that seemed to circumvent the problem of legally protected classes (and thus differences in kind) (Fourcade and Healy 2013a, 2013b; Krippner 2016; Poon 2009).

So what is left is a "pure," so to speak, behavioral performance, a self artificially detached from its social entanglements. For that self, the freedom to choose quickly becomes an obligation to optimize (Dardot and Laval 2013). This is not simply a matter of quantification. What is crucial here is the promise of movement, characteristic of a human capital view of the world: Everything—from skills to health to (even) genetics—may be understood as the result of individual "choices" that can be measured, made more efficient, and "capitalized" upon. As Michel Foucault (2010) remarked in his *Collège de France* lectures, neoliberal economic theorists treat individuals as entrepreneurs of themselves, investors in themselves. But today, digital technologies allow us to take this logic to a new level: We can be accountants of ourselves, keeping track, all the time (Neff and Nafus 2016; Schüll 2016b).

I will return to this point. Suffice for now to say that ordinal judgments—especially those captured by liquid objects, such as scores—have their own kind of looping, what Espeland and Sauder (2007) call the "reactivity of rankings." As with nominal judgments, new subjectivities are formed in the process too, through the incorporation of the ranking criteria into behavior and self-feelings. In the credit business, countless self-help guides and consultants stand at the ready to assist people and organizations in their efforts to optimize themselves and behave in a way that will be rewarded by the scoring algorithm. In the wine business, winemakers orient themselves to the scale and try to produce a wine that conforms to the critics' supposed underlying taste (which motivates the grade). Cited in a recent *New York Times* article, a winemaker and consultant in Napa Valley reports "receiving calls all the time from people saying they wanted to make a 100-point wine and they were willing to pay to do it." The "freedom" to move up the ordinal scale does not come cheaply.

RE-ENTANGLEMENTS

This last example suggests that ranks, or numbers on a grading scale can become *intrinsically meaningful*. Although contiguous with the other 99 points, the 100-point wine is in a

class of its own, an unattainable ideal, something very special. Espeland, Sauder, and Stevens have argued that commensuration processes erase qualitative differences. But in truth, ordinal rankings often recreate types: Categorical differences reassert themselves all the time from within ordinal processes. The liquids solidify again or leave chunky deposits behind.

Phantom De-categorization and the Persistently Lumpy Politics of the Ordinal Society

Several contradictory tendencies may be unfolding at once. First, the ideal of a fully continuous scale is often unattainable. Many of the scales we use in the social world are discrete. In general terms, the tighter the scale and the fewer the positions, the more it looks like a caste system, a hierarchical order composed of hermetically different kinds of people or things. There was a French chef—Bernard Loiseau—who committed suicide over hints that he might be losing his third Michelin star. In this case, the three-star status was so deeply intertwined with his own identity that he could not survive being "only" a two-star chef—a huge qualitative downgrade. Similarly, if a scale of commensuration is very rigid and does not afford possibilities or instances of change, as in the case of height or Médoc wine classifications (which have barely budged over a century or more), then it comes to be understood as an ordering of different "kinds"—the tall and the short, the *crus classés* and the rest.

Second, even fluid or more disaggregated scales have threshold effects too, where arbitrary cutoff points suddenly constitute qualitatively different categories. The "1 percent" is technically a position on a continuous scale, yet (partly because the distribution of income positions has such a long tail at this end) those who occupy it form a symbolically real category. In many school districts around the country, an IQ of 130 is needed for inclusion in "gifted children" programs. The continuous scale suddenly gives rise to a solid object, the gifted child, spurring ancillary discourses and services. Borrowers who score below 620 on the FICO scale may not obtain a conventional mortgage guaranteed by the federal government but have to shop for a "subprime" product instead, with its more adverse structure and conditions. A new category emerges, the subprime borrowers, possibly anchoring new forms of mobilization and consciousness—in some ways, a new class system cutting across other dimensions of people's social position (Fourcade and Healy 2013a). And depending on which side of the BB+/BBB– cut off they fall on a scale that goes from D to triple A, bonds rated by Standards and Poor are considered "investment-worthy" or "speculative" and will be treated accordingly by the financial markets and the institutions that regulate them.

Third, categorical differences reassert themselves through the channel of individual differences. Scaling through statistical means elevates and rewards new forms of fitness and performance. These new criteria of worth are individually based rather than based on group characteristics. In recent work that Kieran Healy and I have been doing (Fourcade and Healy 2013b), we show that categorical variables, such as race and ethnicity, are strong predictors of the probability that certain adverse credit events will occur. However, the inclusion of even a very crude measure of the credit score *completely obliterates* the predictive value of *all* of categorical variables (with the exception of age and financial literacy). The scoring algorithm is not only frighteningly efficient as a predictor of behavior (and thus credit risk), it does so in a way that appears to be categorically "fair" or neutral. This completely changes the conversation about the role of nominal categories in the reproduction of social inequalities.

Let us go back to the history of the IQ test for an older but similar illustration of the problem at hand. According to Carson (2007), nothing in the way the IQ test was used in the French context, where the scale was originally designed, could be taken to support a claim

that intelligence was biological, hereditary, or fixed for all time. The claims of psychologists were circumscribed, IQ was just one among many tests, and it was never conceived as a measure of talent or merit: France had its famed *concours* to select "the best of the best" among its citizens. But transported to the U.S. context with its both inclusive democratic aspirations and exclusionary ethno-racial history, IQ was seized upon by all major social institutions (the military, government, corporations, schools) as an aid in hiring or admission or to argue for major reforms and new policies (e.g., mass sterilizations). Entangled in the eugenicist movement of the early twentieth century, IQ became one of the most vivid exemplars of scientific racism. Since the technology also identified "exceptional" members of historically marginalized communities, the continued relegation of their peers who did not score so high seemed legitimate. Ethno-racial differences could be grounded in "nature" without betraying the democratic ideology. No matter that the benchmark was designed in a way that ostensibly favored the dominant classes: The liquid process of commensuration helped resolidify the notion of fundamental differences between groups. (Indeed, all the more since IQ—unlike the credit score—was understood as a fixed individual characteristic.)[11]

We find an echo of this familiar dispute in present-day scorecard technologies. Since credit scores are "blind" to categorical differences in their design, any categorical difference in credit behavior that surfaces *appears* to be rooted in the relative "merit" (or moral "nature") not simply of individuals but of categorically different populations, *as if* one could identify some essential, moral difference between them. The ordinal scaling of individuals, organizations, and objects often ends up recreating precisely those nominal categories that it was designed to erase, in a more seemingly "neutral" form (and therefore more socially legitimate and intractable). There are several reasons for this. First, we ardently look for these differences no matter what, particularly in the United States.[12] Second and more importantly, categorical differences will still assert themselves in the structure of the original data, in the output of algorithms and decision-making devices, and consequently in the interpretation of outcomes.

Let me take each aspect in turn. First, certain categories of individuals may be over- or underrepresented in the data simply as a result of the infrastructure of data collection. This is what Kate Crawford (2013) calls the "signal problem." For instance, some people and communities may be excluded from the data collection process, or underrepresented, because they are invisible to the data infrastructure (e.g., if they have fewer smartphones, fitbits, credit cards). Other individuals and groups may be disadvantaged, instead, by their greater visibility: The over-policing of minorities, for instance, translates into their overrepresentation in risk models, thus motivating further policing (Angwin et al. 2016; Harcourt 2006).

Second, even when data is available and uniformly collected, it will never incorporate the totality of an individual's social situation. When good performance on the credit score requires consistency in paying one's bills, for instance, those who cannot easily tap into social networks, either because of social isolation or because these networks are resource poor, will have a harder time getting through a rough patch. But this structural difference, which may be as consequential as (and is certainly correlated with; see Smith 2010) an individual's skin color, for instance, is not legally protected as such. Consequently, the bad credit event made more likely by network weakness gets encoded as a reflection of individual agency, that is, as the product of irresponsible choices.

We are in the midst of a digital revolution that is accelerating the generalization of ordinal technologies for ranking people, things, and organizations. With their help, the categorical structure is being eroded. The technology promises even more: The solids will eventually melt away. By *de-categorizing* the subject, ordinalization fits and serves the democratic ideal.

Because the scale of valuation has been hyper-personalized, the principle of success or failure seems to reside within the entity being ranked (properly reconstituted through new mechanisms of surveillance and measurement), not in the structural features of the inherited nominal/categorical system (Simon 1988). Individualism thrives, fueled by the abundance of behavioral data. For those who are lucky enough to do well on these scales (and I mean "lucky" in a sociological sense of course), it will feed their sense of deservingness. The others will feel like moral failures even though the sources of the failure often lie elsewhere, outside of them.

Moreover, the statistical patterning of good or bad performances on these scales (by gender or race, for instance) has now the potential to be reinterpreted as a cultural difference between populations, reinscribing nominal difference with a vengeance, at the heart of the ordinal, ideologically liquid society. So the real question, we may ask, is "When is difference just difference, and when is difference something that inexorably stratifies a population" (Duster 2015:5). As my Berkeley colleagues remarked in the introduction of *Inequality by Design*, a book written to "crack the Bell curve myth," "it is not genes but caste positions that explain the apparent differences in cognitive performance" (Fischer et al. 1996:20). Likewise, we may suggest that it is not morality but the relationship between nominal category and structural position that explains categorical differences in credit behavior (Fourcade and Healy 2013b; Poon 2012). Because the society that is liquid in theory continues to be lumpy in practice (i.e., it continues to be structured by nominal difference), the best a system of individualized, behavioral quantification may be able to provide is what I would call—paraphrasing Erving Goffman—*phantom de-categorization*,[13] artificially produced through the use of statistical controls that seemingly dissolve nominality into behavior and structural forces into individual success or failure.[14] And thus the digital era is witnessing the emergence of a new type of politics, articulated around notions of data justice, statistical (rather than racial) profiling, disparate impact (rather than discrimination), and algorithmic bias (Barocas and Selbst 2016; Harcourt 2015). But the institutions of ordinality are harder to make visible (and politically accountable) than the institutions of nominal difference *because they were designed to hide these differences in the first place*.

THE PRICE WE PAY: NOMINALITY, ORDINALITY, AND MONEY

The ultimate veiling of differences, perhaps, comes from their solubility into money. Both the nominalizing process and the ordinalizing processes are tangled up with monetary valuation—but in different ways. Ordinalization techniques differentiate people and things in a world that presumes fundamental, underlying equivalence. As commensuration is already implied, they naturally lend themselves to being translated into monetary values. Nominality, by contrast, veers toward uniqueness. Nominal categories cultivate their pricelessness, which in practice means *either* sidestepping the relationship to money altogether or embracing its opposite: the aggressive enrollment of money to create symbolic difference. Body parts, children, or nature may be apprehended through the logic of gift (in which case they are not priced at all); alternatively, they might fetch an exorbitant price (Fourcade 2011; Healy 2006; Zelizer 1985).

Most of the time, the production of monetary values involves oscillating between the "pricelessness" rationale of nominality and the "commodification" rationale of ordinality. For instance, many American institutions, such as colleges and universities, justify themselves in terms of *both* a logic of comparability and a logic of uniqueness. The first operates through various measures of organizational performance and the second through the ambiguous notion of "fit," where each institution seeks to become a world unto itself, incommensurable with its competitors. This explains, perhaps, why price variations in American colleges do not align well with rankings based on performance metrics. Nominal claims, in

other words, create market niches that allow their members (and in particular, their socially powerful members) to reposition themselves favorably and exclusively in the world of prices. Nominal judgments about intrinsic character and difference provide an alternative rationale for the assessment of worth, which muddles the commensurative logic. We see the same tension at play in the domain of wine, where worth may be anchored simultaneously in the ambiguous world of essence and distinctiveness and in the implacable universality of the critics' grade. French and American vintners use existing *terroir* classifications to enhance their prices but also mobilize high tasting grades and customer demand to formulate new or upgraded *terroir* claims.

Nominalization demarcates communities of difference and is thus quite inimical, at least as a first approximation, toward the kind of hard commensuration that money activates. Nominal claims typically equalize value within the category and rely on nurturing collective bonds to foster collective appreciation toward the outside.[15] A social category's ability to raise its economic value relative to others is thus primarily a reflection of the solidarity within, the time investments that support it, and the forces that might contradict it. But it is not uncommon for money to be used as a marker of boundaries, particularly around the most powerful categories: Examples include the selling of aristocratic titles, licenses to enter certain professions, membership fees into exclusive clubs, or the ability to attend an expensive private school. Money (a cardinal/ordinal medium) can thus protect, even engineer, categorical difference. But for participants, its effectively stratifying influence often recedes into the background once the initial barrier of entry is crossed. Generally, the higher the money barrier to get into a category, the less active the formal sorting within and the more invisible the use of money for everyday transactions and exchange. Instead, social interactions among and with the very wealthy tend to take a priceless form: gift exchanges, all-inclusive services, complementary goods. Nominality promotes what we may call *categorical communism*.

Ordinal technologies have a very different relationship to money, establishing a much tighter connection between the ordinal scale itself and its monetary counterparts. Their object is more liquid and thus less costly to manage (Carruthers and Stinchcombe 1999). There are no a priori barriers to entry: Everyone gets scored. Furthermore, *if* the ordinal technology works the way it is supposed to work (and we have seen in the previous section that this is a big if), anyone can in principle achieve a good outcome. Strategies of appreciation, therefore, emphasize (1) the management of individual performance–keeping score of one's fitness and position on the scale and of the accumulation of capital that sustains it (*accounting*), (2) the treatment of the self as a bundle of assets to be valorized through constant upgrading and an orientation to the future (*investment*, in education and skills especially),[16] and (3) the admission that risk is an inherent part of these processes and must be borne individually (*entrepreneurship*). Ordinality, in other words, produces *capitalists of the self*, simultaneously attuned to the demands of accounting, investment, and entrepreneurship in their own reputation, health, or social networks—all presumably translatable into monetary values. Furthermore, individuals condemned to constantly manage the database on and of themselves, to treat their bodies and behavior and community as work in progress, always at risk of failing or falling behind, might become rather self-obsessed too. Ordinal technologies fuel a narcissistic condition, fastening people onto their own reflection in the icons and symbols on the machine (Feher 2009; Schüll 2016a).

CONCLUSION

Today, more and more aspects of social life—from personal connections to creditworthiness to the command of language—are amenable to ordinal quantification, crowd-sourced from

behavioral traces left in opaque data infrastructures. The promise, of course, is that one day these traces (state records, market records, social media records) may converge to produce an ostensibly ratable self—a possibility that Kieran Healy and I (Fourcade and Healy 2016) identify as a specific form of capital: *übercapital*. In fact, the monetary translation of digitally acquired forms of capital is already here, effectively bankable in the form of market advantages, such as better terms of credit (for disciplined debtors) or insurance (for those who live up to their fitbits), direct transfers or payments (for those with measurable "social influence"), or exclusive privileges (for "loyal customers," namely, wealthy ones and heavy spenders). Much like education before, ordinal technologies carry within them the political promise that they will reward the virtuous—behind the veil of nominal differences. All that is needed, it seems, is an open process of (digital) incorporation so the metrics may do their work.

But we know that behavior is not independent from social structure: Bits of data will continue to encode existing forms of social advantage and disadvantage. At the same time, we know that these bits are recomposing society, creating new divisions and identities, and outlining unchartered political possibilities. Finally, it does matter that the whole operation is oriented to valuation and profit, building and performing the new face of capital. These are the three certainties we can hold on to. As for the rest, who knows? The political and economic tracks on which the ordinal society will ride its way out of the present are still being built.

ACKNOWLEDGMENTS

I am grateful to Kieran Healy, Mara Loveman, Roi Livne, John Levi Martin, Cristina Mora, Etienne Ollion, and Dylan Riley for their close reading of this piece and to Ken Alder, Bruce Carruthers, Matthew Desmond, Paul DiMaggio, Steven Epstein, Wendy Espeland, Pierre-Olivier Gourinchas, Daniel Hirschman, Steven Lukes, Christopher Muller, Isaac Reed, Iddo Tavory, Helen Tilley, Emanuel Ubert, and Robin Wagner-Pacifici for helpful comments and suggestions. The usual disclaimer applies.

NOTES

1. Philosophers, of course, have written extensively about principles of categorization. In *The Organon*, Aristotle outlines 10 categories that are necessary to know something, 4 fundamental ones (substance, quantity, quality, relation) and 6 other. Immanuel Kant (in the *Critique of Pure Reason*) identifies also four fundamental categories (quantity, quality, relation, and modality). In some way, my own classificatory scheme overlaps with theirs (quantity [cardinal], quality/substance [nominal], and relation [ordinal]). However, I seek to use these principles to analyze concrete social processes, as opposed to the working of the mind.
2. My view here is more expansive than Boltanski and Thévenot, who allow only for six fundamental criteria of justification.
3.

> Right and left, having a different relation to the body (a right relation and a left relation, so to speak) are different in themselves. (They are not two identical entities situated in different places, as we know pretty well from sensuous experience). Being different parts of a whole, right and left differ in value as well as in nature, for the relation between part and whole is hierarchical, and a different relation means here a different place in the hierarchy. Thus the hands and their tasks or functions are at one and the same time different and ranked. (Dumont 2013:298)

4. These laws define certain aspects of persons (race, religion, gender, sex, national origin, age, disability, citizenship, familial status, veteran status, genetic information) as "protected" and thus unusable in a range of contexts (housing, employment, credit, etc.).

5. For instance, FitzGerald and Cook-Martin (2014) show that democratic regimes on the American continent were the first to exclude some immigrant groups (Asians and Africans) and privilege others (Europeans) and took longer to repeal discriminations.
6. Similarly, Espeland and Sauder (2007) show that elite law schools initially resisted ranking projects on the grounds that their inherent qualities could not be reduced to numbers.
7. *Terroir* indications tend to raise an area's profile and establish a relatively secure sales and marketing monopoly for the producers within that area.
8. Thus, Article 1 of the U.S. constitution explicitly forbids the United States from granting any titles of nobility. One of the first issues the new Republic faced was how to refer to the president—As vice-president, John Adams recommended the title "His Highness, the President of the United States and Protector of their Liberties." James Madison rejected this out of hand, Washington was embarrassed by it, and very quickly the president came to be—and remains—referred to as "Mr. President." I thank Kieran Healy for this example.
9. Indeed, "the capacity of the computer to determine proportional ancestry at the molecular level" obscures both the social conditions that created this racial facticity in the first place (e.g., the construction of racially distinct reference populations) and the persisting relevance of entrenched differences in the relative structural positions of racial groups in determining relevant outcome (Duster 2015:7; also see Epstein 2007).
10. I mean egalitarian in the sense of a society that conceives of itself as such, namely, as a society of free individuals who are equal in status. This is what Dumont (1977) calls an "ideology." The reality of such a society can be very different obviously.
11. It is perhaps because of this presumed fixity and the lack of a promise of progress that IQ soon gave way to the "multiple intelligences" argument, which re-nominalized differences in IQ by distinguishing seven (unrankable) *types* of intelligence and challenged the stigmatization wrought by the ordinal scale on certain categories of people.
12. Facebook, for instance, produces an original "ethnic affinity" measure based on an individual's social media activity, which then allows marketers to target specific ethno-racial groups.
13. The reference is to Goffman's (1963) "phantom normalcy," or the process by which stigmatized people act as if the stigma did not exist in order to be granted a "phantom acceptance" from what Goffman calls "normal society."
14. As Ezra Klein (2014) puts it, "the problem with controls is that it's often hard to tell the difference between a variable that's obscuring the thing you're studying and a variable that *is* the thing you're studying."
15. Or—at a minimum—legal protection from relative depreciation for those "social aggregates" that have been priced as less valuable or more risky (Bouk 2015; Krippner 2016).
16. See Brown (2015), Feher (2009), Fourcade and Healy (2013b), Muniesa et al. (2016).

REFERENCES

Abascal, Maria. 2015. "Us and Them: Black-White Relations in the Wake of Hispanic Population Growth." *American Sociological Review* 80(4):789–813.

Abbott, Andrew. 1995. "Things of Boundaries." *Social Research* 62(4):857–82.

Abbott, Andrew. 2015. "The Future of the Social Sciences." 37th Marc Bloch Lecture. École des Hautes Études en Sciences Sociales. Paris, June 18. Retrieved August 13, 2016 (http://home.uchicago.edu/aabbott/Papers/Marc%20Bloch%20Lecture%20Pre%20Trans.pdf).

Allen, Danielle. 2015. *Our Declaration. A Reading of the Declaration of Independence in Defense of Equality*. New York: Liveright.

Angwin, Julia, Jeff Larson, Surya Mattu, and Lauren Kirchner. 2016. "Machine Bias. There's Software Used across the Country to Predict Future Criminals. And It's Biased against Blacks." *ProPublica*, May 23. Retrieved July 26, 2016 (https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing).

Bargheer, Stefan. 2016a. "Quantitative Pluralism: Alfred C. Kinsey and the Natural History of Survey Research." Unpublished manuscript.

Bargheer, Stefan. 2016b. *Moral Entanglements. The Emergence and Transformation of Bird Conservation in Great Britain and Germany, 1790–2010*. Unpublished manuscript.

Barocas, Solon, and Andrew Selbst. 2016. "Big Data's Disparate Impact." *California Law Review* 104:671–732.

Barth, Fredrik. 1998. *Ethnic Groups and Boundaries. The Social Organization of Culture Difference*. Long Grove, IL: Waveland Press.

Blau, Peter M. 1977. *Inequality and Heterogeneity: A Primitive Theory of Social Structure*. New York: Free Press.

Boltanski, Luc, and Arnaud Esquerre. 2014. "La ' collection,' une forme neuve du capitalisme la mise en valeur économique du passé et ses effets." *Les Temps Modernes* 3(679):5–72.

Boltanski, Luc, and Laurent Thévenot. 1999. "The Sociology of Critical Capacity." *European Journal of Social Theory* 2(3):359–77.

Boltanski, Luc, and Laurent Thévenot. 2006. *On Justification: Economies of Worth*. Princeton, NJ: Princeton University Press.

Bonilla-Silva, Eduardo. 2003. *Racism without Racists: Color-blind Racism and the Persistence of Racial Inequality in the United States*. New York: Rowman and Littlefield.

Bouk, Dan. 2015. *How Our Days Became Numbered: Risk and the Rise of the Statistical Individual*. Chicago: The University of Chicago.

Bourdieu, Pierre. 1984. *Distinction. A Social Critique of the Judgment of Taste*. Cambridge, MA: Harvard University Press.

Bourdieu, Pierre. 2014. *On the State: Lectures at the Collège de France 1989–1992*. Cambridge, UK: Polity.

Bowker, Geoffrey, and Susan Leigh Star. 2000. *Sorting Things out. Classification and Its Consequences*. Cambridge, MA: The MIT Press.

Brown, Wendy. 1993. "Wounded Attachments." *Political Theory* 21(3):390–410.

Brown, Wendy. 1995. *States of Injury: Power and Freedom in Late Modernity*. Princeton, NJ: Princeton University Press.

Brown, Wendy. 2015. *Undoing the Demos: Neoliberalism's Stealth Revolution*. Brooklyn, NY: Zone Books.

Brubaker, Rogers. 2015. *Grounds for Difference*. Cambridge, MA. Harvard University Press.

Brubaker, Rogers. 2016. "The Dolezal Affair: Race, Gender, and the Micropolitics of Identity." *Ethnic and Racial Studies* 39(3):414–48.

Brubaker, Rogers, and Frederick Cooper. 2000. "Beyond Identity." *Theory and Society* 29(1):1–47.

Canaday, Margot. 2009. *The Straight State: Sexuality and Citizenship in Twentieth-century America*. Princeton, NJ: Princeton University Press.

Carson, John. 2007. *The Measure of Merit. Talents, Intelligence, and Inequality in the French and American Republics, 1750–1940*. Princeton, NJ: Princeton University Press.

Carruthers, Bruce, and Arthur Stinchcombe. 1999. "The Social Structure of Liquidity. Flexibility, Markets and States." *Theory and Society* 28(3):353–82.

Crawford, Kate. 2013. "The Hidden Biases in Big Data." *Harvard Business Review*. Retrieved July 26, 2016 (https://hbr.org/2013/04/the-hidden-biases-in-big-data).

Dardot, Pierre, and Christian Laval. 2013. *The New Way of the World: On Neoliberal Society*. Brooklyn, NY: Verso.

Dumont, Louis. 1977. *From Mandeville to Marx: Genesis and Triumph of Economic Ideology*. Chicago: University of Chicago Press.

Dumont, Louis. 1980. *Homo Hierarchicus: The Caste System and Its Implications*. Chicago: University of Chicago Press.

Dumont, Louis. 2013. "On Value. The Radcliffe-Brown Lecture in Social Anthropology, 1980." *HAU: Journal of Ethnographic Theory* 3(1):287–315.

Durkheim, Emile. 1995. *The Elementary Forms of Religious Life*. New York: The Free Press.

Durkheim, Emile. 2014. *The Rules of Sociological Method and Selected Texts on Sociology and Its Method*. New York: The Free Press.

Durkheim, Emile, and Marcel Mauss. 1963. *Primitive Classification*. Chicago: University of Chicago Press.

Duster, Troy. 2015. "A Post-genomic Surprise: The Molecular Reinscription of Race in Science, Law and Medicine." *British Journal of Sociology* 66(1):1–27.

Emirbayer, Mustafa, and Matthew Desmond. 2015. *The Racial Order*. Chicago: University of Chicago Press.

Epstein, Steven. 2007. *Inclusion: The Politics of Difference in Medical Research*. Chicago: University of Chicago Press.

Epstein, Steven, and Stephen Timmermans. 2010. "A World of Standards but Not a Standard World: Toward a Sociology of Standards and Standardization." *Annual Review of Sociology* 36:69–89.

Espeland, Wendy, and Stuart Michaels. 2016. "The History of the 10%. Social Science and the Construction of Gay Identities." Unpublished manuscript.

Espeland, Wendy, and Michael Sauder. 2007. "Rankings and Reactivity: How Public Measures Recreate Social Worlds." *American Journal of Sociology* 113(1):1–40.

Espeland, Wendy, and Mitchell Stevens. 1998. "Commensuration as a Social Process." *Annual Review of Sociology* 24:313–43.

Eyal, Gil, Brendan Hart, Emine Onculer, Neta Oren, and Natasha Rossi. 2010. *The Autism Matrix: The Social Origins of the Autism Epidemic*. Cambridge, UK: Polity.

Fausto-Sterling, Anne. 1993. "The Five Sexes: Why Male and Female Are Not Enough." *The Sciences* 33(2)20–24.

Fausto-Sterling, Anne. 2000. "The Five Sexes, Revisited." *The Sciences* 40(4)18–23.

Feher, Michel. 2009. "Self-Appreciation; or, the Aspirations of Human Capital." *Public Culture* 21(1):21–41.

Fischer, Claude S., Michael Hout, Martin Sanchez Jankowski, Samuel Lucas, Ann Swidler, and Kim Voss. 1996. *Inequality by Design: Cracking the Bell Curve Myth*. Princeton, NJ: Princeton University Press.

Fitzgerald, David, and David Cook-Martin. 2014. *Culling the Masses: The Democratic Origins of Racist Immigration Policy in the Americas*. Cambridge, MA. Harvard University Press.

Foucault, Michel. 2010. *The Birth of Biopolitics: Lectures at the Collège De France, 1978–1979*. New York: Palgrave MacMillan.

Fourcade, Marion. 2011. "Cents and Sensibility. Economic Values and the Nature of 'Nature.'" *American Journal of Sociology* 116(6):1721–77.

Fourcade, Marion. 2012. "The Vile and the Noble: On the Relationship between Natural and Social Classifications in the French Wine World." *The Sociological Quarterly* 53(4):524–45.

Fourcade, Marion, and Kieran Healy. 2013a. "Classification Situations: Life-chances in the Neoliberal Era." *Accounting, Organizations and Society* 38(8):559–72.

Fourcade, Marion, and Kieran Healy. 2013b. "Credit Scores and the Moralization of Inequality." Presented at the Annual Conference of the American Sociological Association, New York. Unpublished manuscript.

Fourcade, Marion, and Kieran Healy. 2016. "Seeing Like a Market." Forthcoming in Socio-Economic Review.

Goffman, Erving. 1963. *Stigma. Notes on the Management of Spoiled Identity*. New York: Simon and Schuster.

Hacking, Ian. 1985. "Making Up People." Pp. 222–36 in *Reconstructing Individualism. Autonomy, Individuality, and the Self in Western Thought*, edited by T. L. Heller, M. Sosna, and D. E. Wellbery. Stanford, CA: Stanford University Press.

Hacking, Ian. 1995. "The Looping Effects of Human Kinds." Pp. 351–83 in *Causal Cognition: A Multidisciplinary Debate*, edited by D. Sperber, D. Premack, and A. J. Premack. Oxford, UK: Oxford University Press.

Hacking, Ian. 2005. "Why Race Still Matters." *Daedalus* 134(1):102–16.

Harcourt, Bernard. 2006. *Against Prediction. Profiling, Policing and Punishing in an Actuarial Age*. Chicago: University of Chicago Press.

Harcourt, Bernard. 2015. "Risk as a Proxy for Race: The Dangers of Risk Assessment." *Federal Sentencing Reporter* 27(4):237–43.

Healy, Kieran. 2006. *Last Best Gifts: Altruism and the Market for Blood and Organs*. Chicago: University of Chicago Press.

Igo, Sarah. 2007. *The Averaged American: Surveys, Citizens, and the Making of a Mass Public*. Cambridge, MA: Harvard University Press.

Johnson-Hanks, Jennifer. 2016. *Fertile Number: On the Reproduction of Social Facts*. Unpublished manuscript.

Keith, Verna M., and Cedric Herring. 1991. "Skin Tone and Stratification in the Black Community." *American Journal of Sociology* 97(3):760–78.

Kinsey, Alfred C., Wardell B. Pomeroy, and Clyde E. Martin. [1948] 1998. *Sexual Behavior in the Human Male*. Bloomington: Indiana University Press.

Kinsey, Alfred C., Wardell B. Pomeroy, Clyde E. Martin, and Paul Gebhard. [1953] 1998. *Sexual Behavior in the Human Female*. Bloomington: Indiana University Press.

Klein, Ezra. 2014. "How Racial Discrimination in Law Enforcement Actually Works." *Vox*. Retrieved July 30, 2016 (http://www.vox.com/2014/12/1/7311417/race-law-controls).

Krippner, Greta. 2016. "Democracy of Credit: Ownership and the Politics of Credit in Twentieth Century America." Unpublished manuscript.

Lampland, Martha. 2010. "False Numbers as Formalizing Practices." *Social Studies of Science* 40(3):377–404.

Loveman, Mara. 2014. *National Colors: Racial Classification and the State in Latin America*. Oxford, UK: Oxford University Press.

Mora, Cristina. 2014. *Making Hispanics: How Activists, Bureaucrats, and Media Constructed a New American*. Chicago: University of Chicago Press.

Monk, Ellis. 2014. "Skin Tone Stratification among Black Americans, 2001–2003." *Social Forces* 2(4):1313–37.

Muniesa, Fabian, Liliana Doganova, Horacio Ortiz, Álvaro Pina-Stranger, Florence Paterson, Alaric Bourgoin, Véra Ehrenstein, Pierre-André Juven, David Pontille, Basak Sarac-Lesavre, and Guillaume Yon. 2016. *Elements for a Social Inquiry into Capitalization*. Unpublished manuscript.

Navon, Daniel, and Gil Eyal. 2016. "Looping Genomes: Diagnostic Change and the Genetic Makeup of the Autism Population." *American Journal of Sociology* 121(5):1416–71.

Neff, Gina, and Dawn Nafus. 2016. *Self Tracking*. Cambridge: MIT Press.

Nelson, Alondra. 2016. *The Social Life of DNA. Race, Reparations, and Reconciliation after the Genome*. Boston, MA: Beacon Press.

Patterson, Orlando. 1977. *Ethnic Chauvinism. The Reactionary Impulse*. New York: Stein and Day.

Poon, Martha. 2009. "From New Deal Institutions to Capital Markets: Commercial Consumer Risk Scores and the Making of Subprime Mortgage Finance." *Accounting, Organizations and Society* 34(5):654–74.

Poon, Martha. 2012. "Statistically Discriminating without Discrimination." Unpublished dissertation chapter, University of California, San Diego. Retrieved August 2, 2016 (http://www.ardis-recherche.fr/files/downloads_file_31.pdf).

Porter, Theodore. 1995. *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*. Princeton, NJ: Princeton University Press.

Ritvo, Harriet. 1997. *The Platypus and the Mermaid and Other Figments of the Classifying Imagination*. Cambridge, MA: Harvard University Press.

Rodrigues-Muñiz, Michael. 2015. "Demographic Knowledge, Latino/a Growth, and the Politics of the 'Browning of America.'" Unpublished manuscript.

Schiebinger, Londa. 1993. *Nature's Body: Gender and the Making of Modern Science*. Boston, MA: Beacon Press.

Schüll, Natasha Dow. 2016a. "Data for Life: Wearable Technology and the Design of Self-care." *BioSocieties* (March 7):1–17.

Schüll, Natasha Dow. 2016b. "Sensor Technology and the Time-Series Self." *Continent* 5(1):24–28.

Schutz, Alfred. 1972. "Common-sense and Scientific Interpretation of Human Action." Pp. 3–47 in *Collected Papers I. The Problem of Social Reality*. New York: Springer.

Schwartz, Barry. 1981. *Vertical Classification: A Study in Structuralism and the Sociology of Knowledge*. Chicago: University of Chicago Press.

Simon, Jonathan. 1988. "The Ideological Effects of Actuarial Practices." *Law and Society Review* 22(4):771–800.

Smith, Sandra. 2010. *Lone Pursuit. Distrust and Individualism among the Black Poor*. Chicago: University of Chicago Press.

Starr, Paul. 1992. "Social Categories and Claims in the Liberal State." *Social Research* 59(2):263–95.

Stevens, Stanley Smith. 1946. "On the Theory of Scales of Measurement." *Science* 103(2684):677–80.

Tavory, Iddo. 2016. *Summoned. Identification and Religious Life in a Jewish Neighborhood*. Chicago: University of Chicago Press.

Tilly, Charles. 1998. *Durable Inequality*. Berkeley: University of California Press.

U, Eddy. 2016. "Rise of Marxist Classes: Bureaucratic Classification and Class Formation in Early Socialist China." *European Journal of Sociology* 57:1–29.

Wacquant, Loïc. 1997. "Towards an Analysis of Racial Domination." *Political Power and Social Theory* 11:221-34.

Weber, Max. 1978. *Economy and Society*. Vol. II. Berkeley: University of California Press.

Zelizer, Viviana. 1985. *Pricing the Priceless Child: The Changing Social Value of Children*. Princeton, NJ: Princeton University Press.

Zelizer, Viviana. 1994. *The Social Meaning of Money: Pin Money, Paychecks, Poor Relief, and Other Currencies*. New York: Basic Books.

Zerubavel, Eviatar. 1996. "Lumping and Splitting. Notes on Social Classification." *Sociological Forum* 11(3):421–33.

Zerubavel, Eviatar. 2015. *Hidden in Plain Sight: On the Social Structure of Irrelevance*. Oxford, UK: Oxford University Press.

AUTHOR BIOGRAPHY

Marion Fourcade is professor of sociology at UC Berkeley and currently working on the social underpinnings and social consequences of classificatory technologies in settings ranging from wine to big data/algorithms. Past research has focused on political mores, logics of valuation, and the culture and social structure of economics in comparative perspective. She is the author of *Economists and Societies* (Princeton University Press 2009), a winner of the ASA Distinguished Book Award.