

Chance, Orientation, and Interpretation: Max Weber's Neglected Probabilism and the Future of Social Theory

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Abstract

The image of Max Weber as an “interpretivist” cultural theorist of webs of significance that people use to cope with a meaningless world reigns largely unquestioned today. This article presents a different image of Weber’s sociology, where meaning does not transport actors over an abyss of meaninglessness but rather helps them navigate a world of *Chance*. Retrieving this concept from Weber’s late writings, we argue that the fundamental basis of the orders sociologists seek to understand is not chaos. Action is rendered interpretable, rather, to the extent persons orient themselves to possibilities and probabilities, which remain real but unknowable. In this framework, interpretation and probability are allies, not antagonists. Weber’s systematic use of the probabilistic notion of *Chance* as a central resource for concept formation and sociological explanation seriously challenges current understandings of probability as a purely statistical, atheoretical concern. We outline the conceptual difference it makes when basic categories of sociology are understood as rooted in *Chance*, and we point to the larger implications of Weber’s probabilism for contemporary debates around issues of prediction, action, and interpretation.

Keywords

causation, interpretation, probability, social action, Weber

This article contrasts the image of Max Weber as a probabilistic theorist of social action rooted primarily in expectation against what is today the dominant picture of Weber as an “interpretivist” cultural theorist of webs of significance with which people cope with a meaningless chaotic world. We show that this received view is rooted in a mistaken characterization of Weber’s conception of objectivity and the roots of social action and order. Rather than chaos, the fundamental basis of the objective order that sociologists seek to

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understand is *Chance*.¹ Because persons orient themselves to constructed probabilistic orders, their action can be rendered interpretable. Accordingly, interpretation and meaningful action have a fundamentally different basis in Weber's sociology than in contemporary cultural sociology because neither of these core ideas can be disassociated from probabilistic conceptions.

Taking Weber's systematic use of probabilistic notions seriously makes the contemporary taken-for-grantedness of the dominant picture problematic at best. Our analysis shows that for Weber, interpretation and probability are *allies*, not antagonists.² This is evident in Weber's first full (and unfortunately last) statement of his sociology—the first part of *Economy and Society* (*E&S*; Weber [1921–1922] 2019)—where the notion of *Chance* is not an incidental extravagance or peripheral concern.³ Instead, it is the central resource for concept formation and for delineating a formal theory of action and the construction of social orders.⁴ Nevertheless, the full implications of Weber building the conceptual foundations of his last statement on sociology on *Chance* have yet to be fully digested and taken into account. Part of it is obscurity generated by a lack of appreciation for the intellectual tradition of philosophical probabilism Weber was drawing on (Heidelberger 2015). Weber admittedly “plundered” the key notion of *Chance* from a mostly lost nineteenth-century discourse on probability (von Kries 1886). It was meant to refer to real but unknowable possibilities and probabilities to which people indirectly orient themselves in the form of expectation and judgment (essentially consisting of *guessing*). This version of *Chance* is only partially (and poorly) approximated in the contemporary uses of “chance,” whether folk or statistical (Sauder 2020).⁵ This has significant consequences for how we should understand the conceptual foundations of Weber's sociology and how his work, immensely influential as it has been, has radical implications for contemporary sociology in bringing interpretation and probability into a mutually profitable relationship.

Because of its centrality in Weber's concept-formation efforts, we wager that if you do not understand *Chance*, then the categories of Weber's interpretive sociology will likely elude you as well. These categories describe an objective order composed of “opportunities, probabilities, and risks” people face at every turn as they orient themselves (Tribe 2019:65). The objectivity of this order is not exogenous. Instead, objective order is continuously constructed from anticipatory action shaped by probabilistic expectations. For Weber, the interplay between *Chance* and subjective expectations generated when people orient themselves to Objective Possibility is ultimately productive of whatever factual order we can observe and measure. People “construct” social orders using the looping effects of “conceptions of order,” rules, consensus, and reprimand as maintained and administered by organizations, associations, and agreements and most evident in rationalized orders and formations of power as more or less extensive distributions of probability. We show how this looping approach to connecting the objective and the subjective has a family resemblance to other constructionist arguments for the emergence of social orders.

Notably, Weber's probabilistic version of constructionism is distinct from the most influential contemporary version of such an approach—Berger and Luckmann's (1966) social constructionism—with the difference pivoting once again on the presumed object of people's orientation. For Weber, objective social orders consist of specifications of *Chance* as possibilities and probabilities matched (“looped into”) by corresponding expectations; for traditional social constructionists, a nonprobabilistic institutional order is built instead on sedimented typifications. From the probabilistic perspective, the dynamics of social action are best understood by reference to probabilistic expectation, which remains uneven, fluid, and distributed (see Weber [1913] 1981:177–78; [1919] 2012:350–51; Weber [1921–1922] 2019:104). The typicality, riskiness, or improbability of social action

are observations of possibility and probability independent of the tabulated frequencies that have become more or less synonymous with achieving empirical access to the “objective” dimensions of social life (Kruger, Daston, and Heidelberger 1990).

Having established the uniqueness of Weber’s probabilistic constructionism relative to contemporary contenders, we provide a panoramic reconstruction of Weber’s approach to concept formation, sociological explanation, and action theory, all built on notions from philosophical probability. Throughout, we extract the essential elements of Weber’s sociology, in which probabilistic notions are central to the task of interpretation and explanation. Along the way, we explain why *Chance* so appealed to Weber and whether this heterodox tradition holds untapped lessons for theory and research today. We conclude that reinterpreting Weber’s sociology as probabilistic provides classical foundations for reforming the way sociology approaches and conceptualizes probability more generally by making action probabilistic and locating probability in the world instead of merely in data.

CONSTRUCTIONISM OUT OF PROBABILITY

As may already be apparent, the Weber who emerges from our analysis contrasts sharply with Weber as a straightforward advocate of “interpretivism”—in the various ways this has been understood—a received understanding unchallenged in contemporary sociology.⁶ In the interpretivist view, Weber is a theorist of subjective meaning for whom culture serves as a finite segment of signification tenuously carved out of the inherently meaningless infinity of a chaotic universe. One of Talcott Parsons’s (1972) last—and retrospectively one of his most deft—intellectual moves was to bequeath us a “cultural Weber” that could, without too much distortion, be anachronistically retrofitted into the analytical culture concept he played such a pivotal role in systematizing (Kuper 2009:47; Lizardo 2016). This is but one of many surviving sociological Webers, yet it has acquired prominence over other contenders with the rise of various flavors of cultural sociology in the American scene.

In seeking the basic elements comprising the cultural Weber, Clifford Geertz (1973) offers the most vivid and ultimately influential picture.⁷ Geertz’s (1973:405) Weber is one for whom “all experience is construed experience and the symbolic forms in terms of which it is construed thus determine . . . its intrinsic nature.” “The problem of meaning” features a telling counterfactual, where we are asked to imagine the sort of formless monster a cultureless human animal would be. According to Geertz (1973:46), “Undirected by culture patterns—organized systems of significant symbols—man’s behavior would be virtually ungovernable, a mere chaos of pointless acts and exploding emotions, his experience virtually shapeless.” Thus, people set on a quest for meaning, responding to an “opaque” reality, “a chaos of nameless things and thingless names,” teeming with “specifically senseless experience” (Geertz 1973:100). Here, Weber is a “*verstehende* theorist of tragedy, whose actor [is] . . . oriented to problems of cosmic meaning” (Warner 1978:1319). Geertz, in particular, makes this Weber’s fundamental view, moving directly to the problem of meaning as the essential condition of interpretive sociology (cf. Peacock 1981).

For contemporary sociology’s cultural Weber, with its strongly Geertzian provenance, the predetermined existence of cultural patterns both grounds and justifies analytic acts of interpretation, whose validity and existence are thereby established (Biernacki 2000). To interpret action, analysts “orient” themselves to the cultural patterns and significant symbols the people whose actions are being decoded presumably also orient themselves to, thus placing folk acts and discourses in a maximally interpreted meaning landscape (Reed 2011). Today, the elements of this cultural Weber largely dictate how sociologists read and understand Weber’s “interpretive sociology.”

Nevertheless, seeing Weber's main contribution through this culturalist lens hinges on accepting an implicit metaphysical claim often but mistakenly attributed to him: namely, that the objective reality people face is *opaque*, *chaotic*, and *meaningless* and requires interpretation. As projected onto Weber's sociology, such a "metaphysics of meaningless chaos" is largely off the mark. The presumed "opaque" world finds a much more exacting reference in Weber's sociology as *Chance* or its synonym, *Objective Possibility*—which is different from indetermination, randomness, or incoherence.⁸ In this world, the potential for chaotic dissolution from a subjective standpoint is less a matter of the prevalence of "nameless things" than it is of *unexpected events*. Order appears from orientation to *typical* courses of action and their prediction-affording properties. In this way, Weber incorporates an unconventional approach to probability into sociology, bypassing what is widely believed to be essential to use probability for analytic purposes.

In the standard account, probability requires a numerical recording and counts of the frequency of occurrence to enable a familiar kind of epistemic statement to be made (e.g., *X* will occur with a chance of *p*; *Z* is more likely to happen to *Y* than to *X*; the conditional probability of *A* happening given that event *B* happened is *q*). For Weber, by contrast, *Chance* exists in the world, and although our expectations are immaterial when it comes to "natural events," they are not for situations in which we "can expect subjectively meaningful behavior from others . . . that [we] can thus predict, with varying degrees of accuracy the probability arising from certain *meaning* relationships" (Weber [1913] 1981:159). Here, Weber engages in a rather unorthodox use of probabilistic language (predict, probability, degrees of accuracy).⁹ The social world, as people experience it, is *inherently* probabilistic rather than probabilistic as a by-product of the scientist's calculation. Furthermore, probabilistic dimensions of social experience are integrally linked to interpretive dimensions, not rigidly separated from them. Probability, far from being its antithesis, can actually be a royal road to interpretation.

From this perspective, "objectivity" does not enter the analysis as frequency counts or real numbers, nor for that matter as an exogenous rational standard or metaphysics of presence. Objectivity refers instead to constructing orders of probability from *Chance*, with implications for the explanation of social action.¹⁰ By itself, *Chance* refers to single, unrelated events in the world that simply "occur" but in no sequence we can know or anticipate.¹¹ The best our knowledge structures can do is "thematize . . . a horizon of the possible, which does not necessarily represent the most important aspects of the analysis of the situation" (Palonen 2008:81). These observations may seem familiar from conventional readings of Weber, but consider the following two points.

First, *Chance* is not a static ("noumenal") thing "in itself" but consists of what our anticipatory or predictive pattern recognition latches onto or loops into, in a form not dissimilar from making a successful guess, even though what we guess will always ultimately elude us in its knowability. Second, these are not *only* (or even primarily) epistemological claims, or statements about the nature of knowledge.¹² Probabilism applies to the construction of the social world through novel looping effects, and for Weber, the study of these effects makes sociology distinct among the sciences of action. Weber ([1921–1922] 2019:78) famously argues that sociology's particular concern is *social* action. But this is not just a definitional or stale typological claim. Instead, it is a probabilistic claim attached to the kind of constructionism Weber believes sociology must take as axiomatic. Action can be patterned according to predictions of "natural events," but this does not account for how we "predict" others' expectations, coordinating with our actions. Social action, by contrast, consists of *orientation by expectation* as a looping effect into the "existence of a (specifiable) *Chance*" (Weber [1921–1922] 2019:87).¹³

Such a framework constitutes a radical departure from currently conventional meanings of objectivity and probability. This departure could very well be dismissed as “subjectivist” because it seems to tell us only about a degree of belief based on personal experience without further extrapolation. Yet Weber’s probabilism cannot be so easily fitted into the usual categories of “subjective” and “objective” (Zabell 2011). To follow Weber, we must bracket our received understanding of these categories. The resulting “reshuffling”—encoded, as we will explain, in the image of a “loop” linking the objective and the subjective—leads to a distinct grammar of action. Regardless of what an orientation might specifically be, its presence in social action will construct orders and institutions via *recurrence* and *repetition* as durable looping effects. In this respect, Weber’s probabilistic approach bears a family resemblance to some contemporary arguments positing a similar looping relation between action and objective order, like structuration or field theory (Giddens 1979; Martin 2003). Nevertheless, we argue there is a specific difference between Weber’s approach and the most influential and well-established constructionist approaches today, and this difference is rooted in their divergent understandings of how action acquires a socially constructive capability.

In classic “social constructionism,” people orient to typifications—sometimes durably institutionalized—to produce meaningful, interpretable action. Lines of action falling outside established typifications are rendered meaningless and uninterpretable. Typification, in turn, is a matter of representational schemes constitutive of stocks of “everyday knowledge” (Berger and Luckmann 1966:45). Typifications are arranged on a continuum from highly concrete ones used to organize interaction with intimate and significant others (e.g., “my best friend”) to those structuring our understanding of anonymous or abstract realms removed from direct experience (e.g., “the government”). In this approach, “social structure is the sum total of these typifications and of the recurrent patterns of interaction established by means of them” (Berger and Luckmann 1966:48). A similar, more interpretive concentration on “schemas” uses the equivalent of “reading” to account for the “mutually sustaining relations” between interpretive schemas and worldly resources routinely producing social structures (Sewell 1992:13). Like typifications, schemas create structural order by preventing dissolution into nameless, chaotic opacity.

For both the constructionist and the structurationist, connecting cognition and the reproduction of social order requires solving the problem of how anything can be constructed from a world that lacks any apparent meaning.¹⁴ By way of contrast, a serious consideration of *Chance* forces us to move beyond these conventional parameters by removing the need to bridge the abyss between meaningless opacity and meaningful action. The presence of rules or laws, for example, means people’s probabilistic expectations are secured as they become subject to durable looping effects that ensure (as much as possible) that not just anything can happen (Weber [1913] 1981:160). Strict sanctions penalize action that the rules make improbable, but even “informal” or “spontaneous” orders built on promises, where rules are not strictly codified or remain in the tacit dimension, are also structured by an orientation to the typical, the expected, and the probable. For Weber ([1913] 1981:166, 167), “rational” spontaneous orders like markets and “customary” or conventional spontaneous orders like language are built on common orientations to the probable:

The existence of a “language community” does not mean...that there is a mass conditioned similarity in the production of certain sound complexes (that is not at all necessary) nor only that one “imitates” what others do; rather, it implies behavior through “expressions,” behavior meaningfully oriented toward *certain average probabilities* of making oneself “understood” within a group and therefore the actor

“may” ordinarily also expect this meaningful result. (Weber [1913] 1981:168; italics added)

Persons have specific expectations because they can be oriented to the probability that a set of linguistic expressions will recur and repeat instead of remaining single events that never return (see also Weber [1921–1922] 2019:167–68). Everything hinges on the existence of “average probabilities” in the production and reception of linguistic expression.¹⁵

In Weber’s probabilistic sociology, the primary contingencies in social action and observed social orders are cognitive, but not as stocks of knowledge or content-laden schemas. Rather, the “cognitive basis” of social order refers to probabilistic expectation as the interface with *Chance* in recurrent loops (Weber [1913] 1981:161). Weber’s probabilism trades typification and schematic naming for “objectively correct” modes of action, rooted in and reinforcing “valid” judgments of possibility. Here, typicality refers to the expectations that are chronically present in social action (Weber [1913] 1981:155).¹⁶ Possibilities and probabilities are not to be confused with biological, physical, or geological inevitabilities (e.g., occurring independently of expectations) or with aggregate statistical patterns. Without looping into subjective orientation to enlist social action, *Chance* will not enter into probabilistic construction or yield interpretable action.

Weber’s interpretive sociology thus describes the construction of social order as the maintenance and shaping of loops through probabilistic expectations. What sociologists use to refer to a constructed order, like rules and laws characteristic of “organizations,” the norms that dictate “associations,” and spontaneous orders characterized by “consensus,” even conceptions of order, consist of orientations toward the probable or possible in action.¹⁷ Without the looping relation, action must consist of an inward (“subjective”) orientation with a comparatively small “area of expectations” on which people can scaffold their engagement, especially when it involves others. More generally, actions that loop into no “established order” and that do not feature expectation are improbable outside of exceptional circumstances (Weber [1913] 1981:160). Weber’s interpretive sociology does not embed social action in an “opaque” world needing interpretation. Instead, social action is interpretable to the extent that it orients to a *Chance* world constructed as predictable, expected, and typical (Weber [1921–1922] 2019:104).

ORIENTATION, CHANCE, AND INTERPRETATION

As might already be apparent, a pivotal concept in Weber’s interpretive sociology is *orientation*. This concept is distinct from textual interpretation or even conceptual representation. Instead, it is based on position and location in space and time. Weber refers to “orientation” repeatedly in developing his probabilistic sociology in both the *Logos* essay and the completed first part of *E&S*,¹⁸ using it more often and more consequentially than “subjective meaning” (Tribe 2019:78 footnote 8). Orientation is pivotal in defining the core concept of social action, given its link to objective *Chance*:

Simple “imitation” of an other’s action (the importance of this is rightly emphasized by G. Tarde) should not be conceptualized as specifically “social action” where it is purely reactive, lacking the orientation of one’s own action to that of the other. The boundary is so fluid that often a clear distinction seems impossible. The simple fact that a person adopts from someone else an apparently useful procedure is not social action in our sense. The action is not oriented to the behavior of the other, but the actor has, through observation of this behavior, become aware of certain objective *Chancen*,

and it is *to these possibilities that his action is oriented*. (Weber [1921–1922] 2019:100–101)

For Weber, there is a fine line between imitation (as evident in the work of French sociologist Gabriel Tarde) and orientation. As Weber states ([1921–1922] 2019:100), the difference is that orientation is both meaningfully and causally adequate, as an “orientation to possibilities,” whereas imitation is simply causally adequate, as an orientation to the concrete behavior of other people. For the imitator, “action is causally, not meaningfully, determined by the action of others. If, by contrast, the action of another is imitated because it is ‘fashionable’ or is considered to be traditional, exemplary, socially ‘proper’ or anything similar, then meaning is oriented to the behavior of the source of imitation, or to that of third parties, or to both” (Weber [1921–1922] 2019:101). Action is “meaningful,” has “intended meaning,” and appears as “social action” because it is oriented to the same “source” of meaning to which other people also orient their action.

In this formulation, social action is meaningful because it rests on a subjective orientation. However, we should not assume the reference to subjectivity here necessarily implies orientations to “cultural representations” or “webs of significance.” Subjective orientations have their counterpart in “specifiable *Chance*,” not abstract cultural patterns or systems of ideas (Kalberg 1980). Weber ([1921–1922] 2019:87) emphasizes how “cognition” plays a role in the orientation process by providing evidence “from experience” that a given pattern does exist and “‘statistical estimation’ will ultimately express its ‘general validity.’” For Weber ([1921–1922] 2019:87), “causal adequacy” is signified by a “sequence of events where it is known from **experience** that there is the *Chance* that the sequence will always occur in the exact same manner.” Meaningful adequacy, meanwhile, revolves around the “existence of a (specifiable) *Chance* that action does tend to follow a meaningful course with specifiable frequency” (Weber [1921–1922] 2019:87).

Reading the definitions of causal and meaningful adequacy side by side reveals their common source in Weber’s probabilism in a way that has not yet been sufficiently accounted for despite the fact that bringing interpretation and cause together remains the gold standard of interpretivist sociology (Reed 2011). The only way to coherently join meaning and causation is to follow Weber in constructing a probabilistic explanation of social action. The difference between meaning and subjective meaning “would be a redundancy in Weber’s sense” (Tribe 2019:78, fn 8), not because all meaning is “subjective” as the interpretivist reading of Weber assumes (cf. Heiskala 2011) but because meaningful action is accessible to observers as an objectively verifiable subjective orientation arising in contexts subject to looping effects (Heidelberger 2015).¹⁹ The “contextualization” that references this “existence of a (specifiable) *Chance*” puts “action into a larger, potentially interpretable framework” (Weber [1921–1922] 2019:85). The empirically observable presence of typical action indicates the construction of a space of possibility in which subjective and objective align, expectations loop into chances, and social action is enabled.

Using this approach, sociologists can account for “Adequate Cause” without resorting to reductive individualism; the “personification” of collectives—with self-acting properties—like the “state,” “companies,” “charitable foundations,” and the like (Weber [1921–1922] 2019:89); or the implicit determinism of Millsian necessary and sufficient conditions (Weber [1905] 2012:182–83).²⁰ The interpretive sociologist makes inferences by focusing on “expectations held subjectively... expectations formed on the basis of valid experience.” The more “unambiguously” action has this kind of “orientation,” the “less the meaningful intelligibility of its course can be enhanced” by reference to any alternative nonsocial influences. Among these nonsocial influences, Weber includes psychology (“psychic data”),

biology (“hereditary influences”), and the law (“legal dogmatics”). Probabilistic “expectation” becomes the main influence (Weber [1913] 1981:154).

Accordingly, the following phenomena are, for sociology, to be related on a “gliding scale” of consideration:

- (1) the objectively correct type, approximately attained;
- (2) the (subjective) instrumentally rational type;
- (3) behavior only more or less conscious or perceived and more or less unambiguously instrumentally rational;
- (4) behavior that is not instrumentally rational but is in a meaningfully understandable context;
- (5) behavior that is motivated in a more or less meaningfully understandable context, a context more or less strongly interrupted or codetermined by unintelligible elements; and finally,
- (6) the wholly unintelligible psychic or physical phenomena “in” and “about” a person. (Weber [1913] 1981:156)

In this rendering, the first type refers to social action oriented through looping into constructed social orders, recreating what is “typical” almost perfectly, not least because people can know what is typical and expected. The second type shares this orientation, and is likewise social action, but includes a high dose of subjectivity in what the interpretive sociologist can read as strategic—using the typical to act untypically, say, by cheating or pursuing self-interest—or as nonspecifiable *Chance* (e.g., untypically experiencing “a unique generalized feeling of love” in connection with a “belief in predestination” [Weber [1913] 1981:156]) that might indicate an orientation to a different constructed order. The third type features a less consistent probabilistic orientation than the first two because typicality and expectation are not (and perhaps cannot be) explicit and known; people are subject to looping effects but are not consciously aware of them. The fourth type includes meaningful action not yet incomprehensible because the meaning found can be objectively possible, even if this comes only by way of an analyst’s interpretation. Importantly, this identifies action *outside* a constructionist loop because although meaning is present, it does not take form as expectation. The fifth and sixth feature expectations directed toward phenomena not constructed by those expectations; here, looping effects are absent from the events that occur.

Weber (see [1921–1922] 2019:82–83; [1913] 1981:154) is skeptical of such clean breaks between types when constructions of possibility feature a mix of social and nonsocial elements of action. Distinctions between orientations are always “fluid” and bleed continuously into one another.²¹ As an analytic method, inferring Adequate Cause relies on comparison classes between “social action” featuring probabilistic expectations versus “action” that does not feature them. Adequacy, in this sense, refers to an explanation that successfully captures looping effects.

Weber notes how people can make probabilistic comparisons without needing explicit knowledge of probabilities. This involves “[counting] on the order-oriented behavior on the part of others, just as, on average, [social actors] regulate their own action according to the same kind of expectation held by others” (Weber [1913] 1981:162). Implicit to this orientation are expectations about what would happen if one did *not* orient his or her action in this manner and did *not* act to maintain a constructed order as expected. Someone can expect, for instance, what will happen if “in a commercial economy, the orientation of activity is [*not*] on the part of autocephalous individual economies” that “budget according to the marginal utilities of money and take advantage of market *Chancen* in the gainful conduct of enterprise in terms of capitalist calculation” (Weber [1921–1922] 2019:204). The consequences are so predictable, Weber ([1913] 1981:172) argues, that this serves as the “deciding motivation of

all economic action under commercial economic conditions,” thus making all economic action into social action because it only has *these* possibilities.

More generally, action can have a “consciously chosen” Adequate Cause, but only where this does not presuppose an additional orientation does it engage *Chance* in a manner *not* conducive for social construction. None of these points vary between the more familiar instrumental, value-rational, emotional, and traditional types (Weber [1921–1922] 2019:101), all of which can enter into loops of probabilistic construction. What matters is whether we are talking about social action (captured by a loop) or action (not captured). As Weber ([1913] 1981:160) puts it:

The possible (subjectively intended) meaning of social action clearly is not exhausted, for example, by orientation particularly toward the “expected action” of others. In the limiting case, action related to others can be oriented solely toward the subjective “value” of its meaning as such (“duty” or whatever); the action then is oriented not toward expectations but toward values. Similarly, “expectations” need not refer to actions of others but can also refer simply to inner states of others (such as “joy”). There is an empirically fluid transition from the ideal type of a meaningful relationship between one’s own action and the meaningful behavior of others to the case where another person (perhaps an infant) is considered only as an “object.” Action oriented toward expectations of meaningful action is, for us, only the rational limiting case.

Thus, social action can be oriented by a typical emotional response, in which case, that emotional response will be adequately caused by a probabilistic expectation. Anything, this suggests, can be made typical, and therefore expected, although actors might not notice it and not feature probabilistic expectations in acting accordingly. One can, for instance, be oriented by a moral value and take no account of the expected behavior of others in such an orientation. The main variations here are recognizably constructionist: first, whether *Chance* has been constructed into durable probabilities and second, whether they loop into social action as expectation.

In Weber’s (see especially [1913] 1981:154–60; [1921–1922] 2019:99) view, sociology shares “action” as a topical focus with other disciplines like law, psychology, history, and natural science. The discipline’s distinct advantage, however, hinges primarily on finding constructions of *Chance* as Adequate Causes of observable action. That social action is “adequately caused” when it more closely approximates what has been constructed as objectively possible can mean that it features a probabilistic expectation alongside “clearly perceived ends and . . . means consciously chosen as ‘adequate’” (Weber [1913] 1981:155).²² If we find persons no longer orienting to specifications of *Chance* or if certain expectations are disappearing entirely, then we can infer the disappearance of a constructed order. Loops can break down, thus orphaning social action and rendering it less interpretable as it assumes more subjectivity simply as action.

ELEMENTAL FORMS OF PROBABILISTIC SOCIOLOGY

For Weber, probability and interpretation presuppose one another such that there can be no interpretation without taking probabilistic expectation into account. We should favor consulting statistical frequency tables over interpretation only when “Objective Probability” fails to find a corresponding subjective orientation, mainly because it does not count on our expectations to occur.²³ The link between orientation, expectation, and specifiable ranges of *Chance* are clear in Weber’s ([1913] 1981:171–72) discussion of how “[i]n one and the same act, the individual can naturally, therefore, participate in a number of kinds of social action”:

A business deal that someone executes with X, who has power of attorney from Y, who may in turn be an “agent” of a voluntary association, includes (1) a verbal and (2) a written association, (3) an exchange association with X personally, (4) another with Y personally, (5) another with the action of those participating in that voluntary association; (6) and the business deal is, in its conditions, co-oriented toward expectations of the potential action of other exchange partners (competitors from both sides) and toward the corresponding consensuses on legality, etc.

The “consciously chosen” ends and means consist of the business deal itself, and this highlights the predictive environment in which the act unfolds, specifically how a social actor must be oriented to make the deal. As we go farther down the list, we ultimately reach “consensus on legality,” which suggests that if personal and written associations are the source of expectations, behind these there is a framework of rules. However, these rules do not directly dictate action in an “objectively correct” sense. Rather, according to Weber, the consensus implicit to the parties involved in the exchange is oriented toward those rules, even if knowing those rules offers little in the way of interpreting social action in this context.

Here are the fundamental ingredients of the predictive environment in which a social action unfolds: some of which features an interpersonal orientation, other aspects of which feature orientations to others that will never be met, but of which one can expect things because of the presence of things like rules and, more specifically, what one learns as “consensus probability.” At all these junctures, certain possibilities are made objective or are given an “objective validity”: Not just anything can happen and not just with anyone. Expectations can form on these grounds, such that a business deal can happen.

The absence of predictability is evident by contrast: “[I]t is especially marked in cases like that of the subduing of the drunkard or that of the emergency aid” (Weber [1913] 1981:170). In neither case do we find social action, nor do we enter a constructionist loop. In the first, this is because anything *can* happen because the situation is unpredictable. We realize it is pointless to agree with the drunkard or expect they will find consensus in what we do. In the second, we no longer deal with a person as we lend emergency aid; our action is oriented toward the sudden intervention of nature that can harm or end a life. We do not have to find agreement with the person suffering because we cannot, of course, find agreement with the injury’s natural source. Attempts at orientations (agreement, consensus, rules) that would create a specification of *Chance* concerning the drunk or the injured person would quickly prove futile. Instead, we act to solve a problem, and once solved, the required orientations disappear.

Weber reveals a probabilistic criterion for the causal explanation of social action in these examples. An Adequate Cause, probabilistically understood, must either (1) specify a range of *Chance* or (2) orientate actors to the same. When explicit agreements specify *Chance*, social action is *associational action*. When the “probability of consensus” does this, social action is *consensual action*. In both cases, social action is oriented to expectations of others’ behavior because things made objectively possible or probable apply to them as well. Because this marks a repeating engagement, social action maintains this orientation across time, not allowing (nonspecified) *Chance* to creep in. Fundamentally, action becomes socially constructive by not allowing just anything to happen and not allowing just anyone to participate in what happens. This can occur as basically as a social relationship between colleagues or as diffusely as a space of consensus “assumed to be empirically valid” (Weber [1913] 1981:170).

Importantly, the “consensus” part of “consensual action” does not leave out conflict. We can find “fragments of a consensual social relation between the opponents in conflict” (Weber [1913] 1981:173; [1921–1922] 2019:117). For Weber, however, “consensus” is a

formal concept indicating an orientation to common expectations held to be valid (“typical”) by others regardless of their basis, rather than any substantive content. Thus, actors can be consensually oriented by customary expectations of how a conflict should play out (as in a duel). Like the “fluidity of transition” in the case of the drunkard and emergency aid, conflict is not necessarily a social action. It becomes social action when it finds an Adequate Cause in the creation of and orientation to specifiable *Chance*.

For instance, when one acts in a conflict only on the expectation that an action can be consensual, this is social action and is socially constructive. More specifically, conflict becomes “competition” when “‘rules of the game’ [determine] the forms of conflict, thereby certainly shifting the conflict probabilities” (Weber [1913] 1981:173). Regulated competitions (the “Olympic Games, elections”) are constructive of social order in ways violent conflict are not because only the former engages with specifiable *Chance* repeatedly. Not just *anything* can be used to win, in other words, and winning or losing carries only certain possible consequences. Conflict becomes *organizational action* as a central authority claims to originate rules about it and, in certain cases, claims to be the only legitimate user of violence (Weber [1913] 1981:173).

Thus far, we have argued that the only plausible way to account for Weber’s “relentless use of *Chance*” in *E&S* is to pivot away from the received interpretations of his sociology. All of these examples contain demonstrations of sociological analysis that are unfamiliar to conventional definitions of Weberian sociology. Outside of specialists in the intricacies of Weberiana, these insights might not seem to matter much. On the contrary, as we will now argue, many “presentist” concerns are at stake here, with direct bearing on contemporary sociological theory and research. Taking Weber as a model, sociologists can begin to unlearn frequentist habits and rethink probability as both topic and resource, making it an aid to concept formation, and thus more than a rote enumeration of ratios (e.g., the “log odds” of logistic regression models) and singular tool of “variable sociology” (Abbott 1988).²⁴

In summary, by 1913, Weber had distilled a heterodox probabilism into an incipient theory of action and the construction of collective orders. Later in *E&S*, Weber builds on this to provide a coherent framework of concepts and topics showing the analytic potential of a *probabilistic sociology*. We will now outline that framework by emphasizing three points of focus where the use of probabilistic concepts proves central: the *Chance/Expectation* loop, Weber’s theory of rationalization, and his approach to power.

The Chance/Expectation Loop

As noted previously, the term “interpretive” must be used with caution in understanding Weber’s sociology because its focus does not include an incipient culture concept via which, in a *primary* sense, a meaningful content is projected onto an otherwise “opaque” world, naming it, giving it a point, and constructing or “forming” it, thus enabling the meaningful interpretation of action (see Geertz 1973:46; Reed 2011:143). As a probabilistic approach, interpretive sociology instead features a sustained focus on the “existence of a (specifiable) *Chance*” as a point of orientation for social action.

The main difference between the different types of social action is *how* subjective orientation contributes to a recurrent pattern. What are the mechanisms by which an orientation is made present in social action? For organizational action, rules limit the range of possibility and enforce an orientation via sanction. But who makes the rules? For a game of chance like roulette, a rule-making authority claiming a legitimate rule-making monopoly is noticeably absent. Thus, being enrolled in the game excludes the possibility of changing its rules. Only

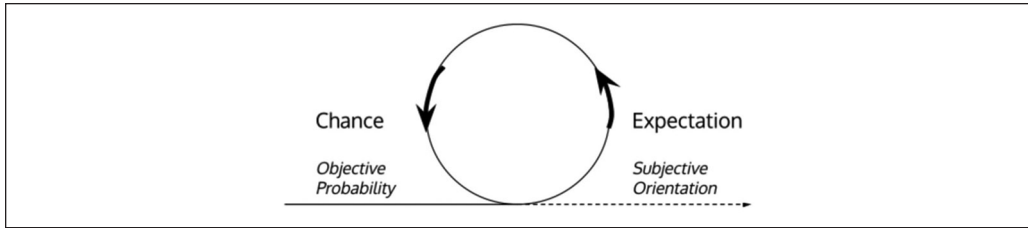


Figure 1. The *Chance/expectation* loop.

with “social differentiation” can the “rational foundation of those rules” be debated and “conceptions of order” be capable of exercising such a change (Weber [1913] 1981:178).²⁵ When social orders are tied strictly to the “probability of consensus,” social action is what *could* meet with consensual approval, featuring higher uncertainty and dynamism than when this is rule-bound.

In each of these cases, different factors construct specifiable *Chance*, giving rise to “Objective Possibility” against what will otherwise remain entirely *nonspecifiable* to us as social actors. Objective Possibility and Objective Probability are technical terms in Weber’s probabilistic theory rather than empirical objects. Objective Possibility does not actually exist as such, and although we can statistically measure Objective Probability, it does not exist in statistical form. Rather, both consist of indirect observations of an unknowable “existence of specifiable *Chance*” as the counterpart to subjective expectation in socially constructive loops. Weber does not claim that the mere existence of rules is sufficient to generate probabilistic expectations, although we can readily observe rules as explicit attempts to specify *Chance*. Without taking form as *sanction*, rules will not matter for social action because by themselves, they cannot create expectation. Some factors (rules, agreement, promises, consensus, conceptions of order) attempt to specify *Chance*, and other factors (sanctions, writing, shame, memory, probability calculation) create orientations to the resulting Objective Possibility in a manner that alienates us from our *decision* of what to expect (see Abend 2018). To explain this process, Weber arrives at the model we called *the loop* as the explanatory linchpin of a revised interpretive sociology.²⁶

Figure 1 depicts Weber’s probabilistic *Chance/Expectation* loop. Specific configurations of *Chance* capture subjective orientation via *learning*, thus creating a loop back into Objective Possibility as expectations.²⁷ Weber ([1913] 1981:168; italics added) explicitly describes this as a reciprocal causal loop such that Objectivity Possibilities are Adequate Causes of subjective expectations and vice versa:

The objectively “valid” consensus—in the sense of calculable probabilities—is naturally not to be confused with the individual actor’s reliance that others will treat his expectations as valid. Similarly, the empirical validity of an agreed-upon order is not to be confused with the subjective expectation of compliance with its subjectively intended meaning. In both cases, however, there is a *reciprocal relationship of intelligibly adequate causation between the average objective validity of the probability* (logically a part of the category of Objective Possibility) *and the currently average subjective expectations.*

The reciprocal relationship between objectively “average probability” and subjectively average expectation is direct in this case as an example of learning what is possible without needing explicit, quantified knowledge of probability. Via learning, people “loop into”

Objective Possibility, accessing, in the subjective form of expectations, the mechanisms specifying *Chance* as repeatable and recurrent events. Learning rules counts, particularly when rules rigidly establish the range of what is objectively possible. Learning can occur by grasping “rational principles” legitimating a certain range of possibilities, at least when those principles can effectively order *Chance*, usually through organizational action (Weber [1913] 1981:177). This can also include trial and error in more consensus-based contexts. Where “agreed-upon order” allows for a wider range of possibility, people learn what can elicit consensus approval as a “convention,” which often takes form in simply *not* meeting with “tangible disapproval” (Weber [1921–1922] 2019:112).

In cases of social action, expectations are no one’s sole possession. They arise, instead, from learning that *reduces* purely subjective motivation and meaning. For Weber ([1913] 1981:161; italics in the original), probabilistic expectation is the subjective construct that corresponds—via a causal process—to objective constructions of *Chance*:

[T]he *objectively* calculable probabilities of the possible expectations also function as an adequate *cognitive* basis for the probable presence of those expectations in actors. . . . [By] a judgment of objective possibility, we obviously mean that those objective probabilities (*Chancen*) are suited on the average to serve as meaningful grounds for the subjective expectations of the actors, and *therefore*, that they actually (in a relevant measure) did so serve.

Thus, the looping of objectivity into subjectivity, evident here as a “judgment of objective possibility,” serves as the cognitive basis for whatever specific form *Chance* takes. As Figure 1 suggests, action can continue forward in time without finding an orientation to the “existence of a (specifiable) *Chance*,” although it will (noticeably) not feature probabilistic expectation.

Weber suggests “action” sustains constructed orders through a “purely inward orientation” to legitimacy (“purely affectively . . . [or] by belief in its absolute validity as the embodiment of ultimate, obligatory values”). This applies particularly when public conceptions can alter specifications of *Chance*. However, this seldom happens without combining with “expectations linked to specific external consequences . . . expectations of a quite particular kind” (Weber [1921–1922]:111–12). Loops enlist social actors via recurrent and reinforcing orientations. The construction of collective order is possible, in this sense, when “purely subjective expectation of compliance with . . . subjectively intended meaning” is replaced by *probabilistic* expectation (Weber [1913] 1981:168). Constructed social orders do not require people to constantly expend “effort” in maintaining their orientations.²⁸ Individuals do not need to be the sources of their own expectations when the myriad ways of configuring *Chance* (rules, conceptions of order, consensus) objectify those expectations as part of a loop: “[T]hat an action is subjectively oriented in meaning to an established order can thereby initially mean that the actual action . . . objectively corresponds to the action they had subjectively intended” (Weber [1913] 1981:160).

Probabilistic Rationalization

For Weber ([1913] 1981:161), the construction of general concepts by sociologists implies that people possess “an average measure of the capacities required to evaluate [the] probabilities, thus helping construct the collective order that the concept describes.” The core assumption is that “objectively existing average probabilities are . . . subjectively taken into account by . . . actors.” Objective Possibility is in no sense uniform; there is no implication

social action will be oriented to them in the same way. The *Chance*/expectation loop suggests many sources of variation in this regard. If, for example, a collective order implies a subjective and objective coincidence in a loop, then a possible orientation toward this order is that of the lawbreaker (“the cheat”) who “orients his behavior to the very rules whose meaning he subjectively consciously violates.” Whether actors are oriented to a certain specification of *Chance* and, if so, *how* they are oriented, results in particular modes of social action. Yet a key source of variation here is how broad the “area of expectations . . . toward which [an] actor believes he can rationally orient his actions” (Weber [1913] 1981:161).

For Weber, in large-scale constructed orders, a plurality of social actions—in terms of their modality and substantive contents—can coincide with the same range of Objective Possibility. Moreover, the very empirical existence and continuation of a given order depends on the specifiable *Chance* that people’s actions are subjectively oriented to the “rules” so defining it (in the case of associations).²⁹ This is not a matter of “either/or” (as the probability of orientation can vary continuously) but more or less: “The association exists so long and insofar as an action, oriented toward the rules in accordance with their average intended meaning, still occurs within a practically *relevant* range” (Weber [1913] 1981:161).

Arguably, the clearest discussion of these points comes in Weber’s ([1913] 1981:177) formal theory of rationalization, as presented in the final pages of the 1913 *Logos* essay. In this account, knowledge and explicit understanding can both maintain and change *Chance* through conceptions of order and the making of rules. Yet as Weber points out, this presupposes a social differentiation of those who make rules and establish the “rational foundation of the rules” from those “practically affected by rational techniques and rules” but who do not know or cannot alter those foundations. Rationalization “does not produce a universal knowledge of . . . conditions and relationships, but rather usually brings about precisely the opposite” (Weber [1913] 1981:178).

Social constructionism, as we saw earlier, theorizes the difference between experience-near “intimate” interactions characterizing local orders and the experience-distant interactions of large-scale orders by appealing to the specificity versus abstractness of typifications. Weber’s probabilistic constructionism, in contrast, points to the relative range of orientations as the more theoretically relevant feature. When construction occurs as rationalization, a range of different typical orientations applies to “organizational action at least partially regulated through rational rules” (Weber [1913] 1981:175). Yet in different ways, Weber emphasizes how, for most, rules find no rational foundation and are not “agreed upon” but are “imposed from above. Groups of people who are, on whatever grounds, capable of influencing action according to their will, impose statutes on this social action on the grounds of ‘consensus expectations’” (Weber [1913] 1981:176). This suggests movement within a range of possibility in the shift from statute to consensus. Different typical orientations vary socially, temporally, and spatially, and this variation becomes particularly evident in the actor typology we can retrieve from Weber’s account.

Rule creators are distinctive for their orientation toward specifications of *Chance* existing principally as a “conception of order.” Their orientation is therefore “inward” (e.g., affective, ethical, or religious), or we might say only valid for expectations within the socially differentiated space of others also oriented by conceptions (see also Weber [1921–1922] 2019:111). Such orientations are typical for the center, origin, or inside a rationalizing space such that “rational rules of an association are . . . imposed or ‘suggested’ . . . for specific purposes” (Weber [1913] 1981:178).

Carriers are proximate to the rationalizing space, the center, or origin, but they are oriented to the same specification of *Chance* as a rule rather than as a conception. “The rules are—though not necessarily with awareness of those purposes of their creation—more or

less evenhandedly subjectively interpreted and actively carried out” (Weber [1913] 1981:178). Individuals with a carrier orientation often find themselves in spaces already configured by Objective Possibility, thus creating a potential for social change in the introduction of new *Chance*. They do so by bearing the threat of sanctions (either official or unofficial) of a “coercive apparatus.”

Those with a *follower* orientation are also oriented by the center, origin, or rationalizing space. This orientation manifests in social action of a more strategic kind, in seeking to realize self- or subjectively defined interests. For individuals with this orientation, they “subjectively [know] the usual application of the rules . . . as far as is absolutely necessary for their private purposes” (Weber [1913] 1981:178). The coincidence of maintaining specifications of *Chance* once envisioned only using conceptions now coincides with, and is durably repeated and reinforced by, a larger array of social action when it can be strategically used in the pursuit of varied interests and combine with other orientations.

Finally, “*the mass*” displays orientations most typical at furthest distance from the center, found more often in peripheries, far from the rationalizing space, and, temporally speaking, distant from the origins. What Weber ([1913] 1981:178; italics in the original) says about this typical orientation indicates a decline in conception and its replacement by consensus at the edge of possible orientation:

[A]n action approximately conforming to the average understood meaning is “traditionally” practiced and usually observed without any knowledge of the purpose and meaning or even the existence of the rules. Thus, the empirical validity *particularly* of a rational order rests on the consensus of actors to conform to the habitual, the familiar, the taught and the oft-recurring.

Significantly, we see a transition in rationalization by moving away from the original source of rules. Conceptions of order can loop into novel specifications of *Chance* at the site of rule creation, but this is less effective away from and beyond the rationalizing space. On the edges, at a distance, in peripheral spaces, consensus holds. Social action reveals a specification of *Chance* not because it has been conceived as “reasonable,” with an explicit meaning, but simply because it is typical or merely probable (“what people do”). Objective Possibility can be durable simply because of the absence of reprimand of certain social actions, even if a rule does apply that ultimately draws on a conception of order.

In this discussion, Weber ([1913] 1981:177) offers a vivid example of *moving between* orientations—from conception to sanction to custom—in the context of learning. Although a probabilistic expectation may never take form as a clear conception, it remains a subjective orientation to the same specifiable *Chance*:

The multiplication table is imposed on us as children exactly as a rational directive of a despot is imposed on a subject. And indeed it is imposed in the most intrinsic sense, as something at first wholly incomprehensible to us in its foundation and even its purposes, but something nevertheless bindingly valid. The “consensus” is initially therefore, plain submission to the customary because it is customary. This remains more or less the case. One learns not through rational deliberations but rather through applied (imposed) empirical cross-checks whether one has calculated in what consensus terms the “correct” way.

In learning multiplication, individuals learn “consensus expectations” for this particular use of rational numbers. For most, what is possible about these numbers are the rules and

sanctions that dictate their proper use. They do not learn the “rational foundations” that make these possibilities objective and specify the *Chance* of using them. Subjective orientation tends toward custom rather than conceptions of order as we move away from the (“other-worldly”) socially differentiated spaces in which conceptions alone can specify *Chance*.³⁰ If multiplication practice remained merely a conception of (mathematical) order and did not transform into sanction (backed by educational institutions), we should not expect so many would know it (or expect they would expect it of everyone else). If multiplication were only a “consensus expectation” without rational foundation or organizational sanction, then we should find limits in such an orientation. Rules maintained by the educational sanction ensure against this with a more durable looping effect.

The larger point is consistent with probabilistic constructionism. Actors can be captured in a loop to engage in recurrent social action via different types of orientation. Ranging closer to or farther from a rationalizing center or historical origin, we tend to find certain orientations: conceptions closer to the center, consensus farther away from it. But although these orientations are quite distinct, in rationalized constructions, they are also *linked* together. Weber ([1921–1922] 2019:107) emphasizes “fluid transitions” between orientations: The same specifiable *Chance* need not be maintained by the same orientation to be part of social action that is equally constructive.

As a general rule, the wider the range of orientations, the more objective (taken for granted, simply assumed) a given orientation will seem to be, coinciding with more social action within a spatially larger (and, we might assume, temporally longer) “area of expectations toward which the actor believes he can rationally orient his actions” (Weber [1913] 1981:159–60). The orientation will appear typical everywhere; the probabilistic expectation that anticipates the probabilities of *not* complying disappears. Even here, social constructions remain subject to Adequate Cause by expectation: If the loops break down, so too will the Objective Possibility of whatever they construct. Depending on these orientations, existing spaces of specified *Chance* change their form and may disappear entirely, as a reflection of how this orientation manifests, via probabilistic expectation, as social action.

Probabilistic Power

For Weber, rationalization occurs via probabilistic pathways constructing order by specifying *Chance*; elsewhere, he uses this reasoning to make distinctions between “communalization” and “sociation” as different ways of constructing social relations (Weber [1921–1922] 2019:120). In the first, social relations produce a sense of belonging; in the second, we find more subjectivity, with sociation featuring more “consciously chosen” Adequate Causes. The distinction mirrors one we can find between an “objectively correct” orientation versus an instrumental orientation. Noticeably, these do not have to feature specifically social action. Where a central authority claims rules of “selection,” sociation consists of an orientation to the expectations of others via rules in a competitive setting (Weber [1913] 1981:173). Otherwise, selection will consist of biology or of one “elemental force” paired against another, and in neither case can expectations be Adequate Causes; in the first because biology appeals only to elements of action found on a natural plane of inevitability and in the second because anything is possible when *Chance* is nonspecified (Weber [1921–1922] 2019:117).

The implication is that social action requires an Adequate Cause to be a judgment of possibility and that there must be something constructing possibility from *Chance*. Arguably, the clearest example of this is found in Weber’s analysis of power, used to decipher the construction of political organizations like states. According to Weber ([1921–1922]

2019:134), “**Power** can be defined as every *Chance*, within a social relationship, of enforcing one’s own will even against resistance, whatever the basis of this *Chance* might be.” Two things deserve comment here. First, Weber’s definition of power, like his definition of the state, has been incredibly influential across all corners of social and political theory (Lukes 2004; Mann 1984; Pels 1998; Poggi 2016; Reed 2013:195). Second, the fact that this core concept is squarely defined in terms of *Chance* is analytically consequential, although a lot of secondary commentary has not focused on this aspect.³¹ As a probabilistic phenomenon, power must be an Adequate Cause, which in this case means both conditions in Weber’s definition must apply: (1) There is the possibility of resistance in a relationship that involves the enforcement of will, but (2) resistance is not typically pursued. Thus, a probabilistic approach to power, like Weber’s, involves mechanisms constructing (and maintaining) a constant Objective Possibility from the *Chance* of its dissolution.

When Weber defines the term “domination” in the 1913 *Logos* essay, he puts particular emphasis on a looping relation giving a central role to expectation rather than nonsocial action in which a “stronger elemental force... somehow asserts itself.” In domination, “the action of those giving the orders is related in meaning to that of those obeying, and vice versa, in such a way that both *can* ordinarily count on the realization of the expectations toward which they have oriented their action” (Weber [1913] 1981:168). In domination, the expectations of one party (order-givers) typically coincide with the expectations of another (order-takers). For Weber ([1921–1922] 2019:135), likewise, “[r]ulership is the *Chance* that a command of a particular kind will be obeyed by given persons... **Discipline** is the *Chance* that, because of a practiced disposition, a command will find prompt, automatic, and schematic obedience.”

In Weber’s ([1921–1922] 2019:339) famous observation, “no rulers will voluntarily rely merely on the material, affectual [sic] or value rational-motives for the *Chancen* of survival. Instead, they will seek to arouse and foster belief in their ‘legitimacy.’” A probabilistic-sociological translation of this statement goes like this: No ruler can rely on “action” to maintain rule. Rulership must acquire an Adequate Cause, keyed to the fact that rulership is a type of social relation with those ruled. Because social relationships are probabilistic, consisting primarily of “the *Chance* that behavior corresponding to its meaning will **recur**,” so is the ability to rule (Weber [1921–1922] 2019:105).³² Thus, to rule requires the enrollment of others oriented by expectations, although these expectations need not necessarily loop into a conception of order (e.g., “the divine right of kings,” “*liberté, égalité, fraternité*”). In a probabilistic sense, legitimacy refers to sources of rule (often these are conceptions of order) as a specification of *Chance* that open up the relationship to the possibility of resistance but that also typically ensure one party will *not* meet resistance in this relationship. This creates the recurrence and repetition that constructs a ruling order (Weber [1921–1922] 2019:341).

Contrary to most readings and applications of Weber’s definition, only now, after having defined rulership and power in relation to *Chance*, are we in a position to discuss Weber’s definition of the state. The state, according to Weber, is a subtype of ruling organization, which he referred to as *political organizations*. Political organizations are characterized by the fact that “the existence and the validity of its orders can be continually guaranteed within a given geographical **area** by the application and threat of **physical** coercion by an administrative staff” (Weber [1921–1922] 2019:135). Political organizations are thus inherently *territorial* and built on Objective Possibility as, in this case, the authorized use of physical coercion in the exercise of rule over other people within that area. Whatever other Adequate Causes (“consciously chosen” or not) might apply in a given territory, social actions coincide with the existence of the state. More bounded types of rulership lack “territoriality,”

such as when power moves as the monarch moves through space, making an orientation to it highly variable (see Ruggie 1993:151). States, however, become Adequate Causes for social actions at all distances from a territorially defined central authority (e.g., “the capital”) and in all temporal periods after a moment of founding or constitution. More specifically, a state is an “**institutionally organized political enterprise**... [whose] administrative staff can lay claim to a **monopoly of legitimate** physical force in the execution of its orders” (Weber [1921–1922] 2019:136).

Thus, the state exists only insofar as there is a specifiable (and therefore nonnegligible) *Chance* of its being an Adequate Cause for all the social action found in a territory. Yet the sole focus on the state (cf. Mann 1984) as a specific mechanism for monopolizing violence within a territory is misguided. The state emerges here as a recurrent and punctuated (rather than inevitable and constant) entry in a larger background of nonstatist associational/consensual action. The existence of a state (like any other organization) is therefore fully probabilistic because it “ceases to ‘exist’ sociologically with the disappearance of the *Chance* that particular forms of meaningfully oriented social action occur. This *Chance* might be very great, or infinitely small... [t]here is no alternative and clearer meaning for the statement that, for instance, a particular ‘state’ ‘exists,’ or ‘no longer exists’” (Weber [1921–1922] 2019:104). Put differently, a state exists as a *distribution* or *range* of Objective Possibility over an extended territory because this concerns the *Chance* that *this* political organization will be recognized (or not) as the sole bearer of the legitimate right to enforce rule via the threat of physical violence. Hence, the state, as Weber understands it, defines a continuous probabilistic field of potential actions and interactions distributed within a given territory that depends on action oriented to ruling relationships as objective sources of probabilistic expectations (Martin, Slez, and Borkenhagen 2016).³³ Power is not constant or deterministic, but constructed through various means, from a repeat “taming” of the *Chance* of resistance to the imposition of will only after having engaged that possibility.

WEBERIAN PROBABILISM AND THE FUTURE OF SOCIAL THEORY

This article has argued for a fundamental revision of one of the classical pillars of social theory: the view that Max Weber advocates an interpretive sociology that presents sociologists with the analytical task of interpreting the meaning social actors project onto the world, thus removing the world from a state of intrinsic meaningless chaos and allowing for action, agency, and social construction. At its core, Weber’s sociology features a primary encounter with a very different world, where many of the interpretivist principles previously built on Weber’s work do not apply. Weber’s is a *Chance* world in which people affirm and ramify mutually reinforcing loops between *Objective Possibilities* and *expectations* based on *orientation*. Weber presents us with a conceptual vocabulary that, unusually, incorporates probability as a perspective on what we do when we act rather than as a methodology (see Du Bois c. 1946). This implies that the phenomena sociologists take as objects of analysis are probabilistic constructions, secured objectively as ranges of possibility and subjectively by the expectations that loop into them. Together, these constitute the predictive, probabilistic environment in which social life unfolds (Veissière et al. 2020). Statistics can (sometimes) attach numerical indices to aspects of this environment, but they cannot account for Adequate Causes of social action that themselves remain just as probabilistic. Thus, to capture Adequate Cause as the result of looping effects and constructions of specifiable *Chance* is, for Weber, essentially sociology’s *raison d’être* as a distinct scientific endeavor.

In the mold of Weber, a probabilistic sociology of this sort would not so much mark a new path than a return to a truncated trajectory, hastily supplanted and quickly forgotten

in the annals of social science (Zabell 2016). Sociology retains a deep commitment to probabilistic thinking in its avoidance of explanation by general laws (Goldthorpe 2016; Lieberson 1992). As a general principle, the discipline locates and accounts for probability in statements of the kind, say, that group X has probability p of experiencing outcome Z , or any of the trends, likelihoods, and (logged) odds sociologists so often find themselves speaking about. Not all social explanations require statements like these, but few sociologists would dispute using these claims to explain the usual array of social facts. It is not hyperbole to say the discipline is known chiefly for producing statements like these, sending them into the public sphere to draw concern and consideration, buttressing particular kinds of professional sociological expertise aimed at forming the basis for plans of action to address specific societal concerns, problems, and policy-related issues (Turner 2015:61).

Nevertheless, we can find cracks in this edifice. Now and then, *Chance* finds its way through the explanatory gaps, and not simply as the sizable random error that outcompetes our best statistical models, haunting our analytic confidence. A now dominant line of historical explanation recognizes counterfactuals and unique conjunctures and is willing to emphasize “incidental happenings and the possibility of causal breaks” as major points of explanatory concern (Ermakoff 2015:68; see also Sewell 1996). More generally, we find attention to the unpredictable “eventfulness” of social life in historical sociology and beyond (Clemens 2007; Goffman 2019; Wagner-Pacifici 2017). Recently, Michael Sauder (2020) appealed to the (folk) notion of “chance” by seeking to highlight the neglected role of “luck” in social explanation.

These efforts do not go as far as Weber’s probabilistic constructionism, as *Chance* remains—to use an old locution—a “topic of” rather than a “resource for” analysis. Nonetheless, they indicate sociologists’ prevailing interest in probabilistic statements extends beyond conventional statistics. More often, this interest appears as the exception that proves the rule (Strand and Lizardo 2021). Probabilistic sociology, or any nonmathematical engagement with *Chance*, is an outlier—what sociologists in particular can appreciate as an objectively improbable use of language in Weber’s ([1913] 1981:168) sense. Thinking probabilistically using “words” (Collins 1984) has hitherto lacked a coherent conceptual vocabulary. This is in part because in sociology, probability has long been a specialized explanatory tool in the form of statistics; this unique discourse, requiring a distinct pedagogy, has given probability, its principles, and even its words a legitimate (“typical”) use. This division of mental labor is etched deeply into sociology, but we argue that the full consequence of the separation of probability from action has not truly been recognized until recently, with the appearance of data science and how it may put sociology, in its present form, on serious trial.

The “new data frontier” is, according to some, poised to upend received knowledge practices and forms of inference with new analytic approaches (Hofman, Sharma, and Watts 2017; Salganik et al. 2020). However, data science is not radically new in the *longue durée* of philosophical discourse on probability: It marks a methodological engagement with the *Chance* world that, with an assist from technology, has managed to surpass limits on statistical practice hitherto believed necessary. Outside the relatively controlled sphere of “structured” data, data science promises to tabulate single events without making them examples of classes (Panza, Napoletani, and Struppa 2011). For some, this new field heralds a “transformation of contemporary economy and society . . . a much wider shift that makes *everydayness qua* data imprints an intrinsic component of organizational and institutional life” (Constantiou and Kallinikos 2015:10). Data science is thus a brand of frequentist probabilistic thinking that renders action probabilistic by turning it into a “data vector” (Posner and Glen Weyl 2018).

With the benefit of Weberian probabilism, we see something important: namely, whether data science makes for better social science can only be answered if we are prepared to ask whether action can (and should) be “datafied” as recordable, digital traces while forgetting completely about interpretation.³⁴ If data science can outflank sociology, as some fear (or hope), this is mainly because sociologists’ current conception of “action,” completely disconnected from probability, cannot put up any resistance. Those who remain unconvinced that theorists will ever find an adequate analytic definition of action recommend that sociologists focus on data analysis instead, using our pedagogy and research to equip ourselves with toolkits *now* necessary to provide access to the objective dimensions of the social world (see Watts 2014). If probability is entirely external to action, so this argument goes, then turning to probability is *per force* a turn away from action.

Yet data science could not guarantee such an analytic breakthrough, or as much profit potential, if it did not already feature a theory of action (see Fourcade and Healy 2017). In this theory, “data extraction,” or the datafication of action, comes before a kind of predictive behavioral modification in which what we might call, after Weber, Objective Possibilities are quite literally presented to actors as an algorithmically modulated expectation or prediction (Fourcade and Johns 2020; Zuboff 2015). In the case of credit scores, Objective Possibilities consist of possible futures classified by risk potential (Kiviat 2019). Algorithmic digital capitalism can make “good matches” between people and products, news stories, or social media posts, entirely on the basis of information flows “appear[ing] to come from within—from cues about ourselves that we volunteered, or erratically left behind, or that were extracted from us in various parts of the digital infrastructure” (Fourcade and Healy 2017:17).

A probabilistic sociology in Weber’s mold does not respond to this as a particularly alien action theory. Rather, it allows sociologists to understand what data science’s version of “action” challenges, constructs, and potentially displaces. It jumps right into the fray and puts probability back into action. For instance, a predictive algorithm replaces other ways of specifying *Chance*, with the tracked digital interface playing the role of a machine-mediated subjective orientation. Algorithmic modulations of action effectively create *more* social action by using data extraction and machine learning to multiply the specifications of *Chance*. Social actors themselves need not have awareness of these modulations qua modes of data subjection or “surveillance” (Brayne 2017). For probabilistic sociology, these are social constructions, but they would remain analytically unspecifiable and essentially clandestine if we remain committed to separating probability from action rather than linking them in a Weberian sense.

As suggestive as these arguments might be, they require we break the mold and allow sociologists to theorize about action as nonnumerical probability. Theories of action have been rejuvenated in the post-Parsonian period by making sociology more conversant with pragmatism, phenomenology, hermeneutics, and cognitive science, yet our efforts remain mostly subsidiary. A theory of action must essentially be *retrofitted* to statistical correlations as a “mechanism” to participate in what remains the dominant explanatory form in our field (Knight and Reed 2019). With the benefit of Weber’s probabilism, we can more clearly see the result is a trap between an explanatory Scylla and Charybdis of considerable consequence for sociological concept formation. Either attend to action but face the potential criticism that our only access to “action” is our own intuition (or what we prefer to read), making our theories of action feature only nominalist or speculative stakes, barring their transformation into user-friendly mechanisms. Alternatively, shift our explanatory concern away from action and onto “systems” and “structures,” accessing these primarily through statistical aggregation. Taking this path faces the potential criticism that without an action theory, these

become *self-acting* “collective personifications” treated as explanatory objects, appearing of questionable analytic validity in comparison with how they appear statistically (Vandenberghe 2007). Hence, this results in theorizing action to make it compatible with statistical patterns, or using statistical patterns to retroactively infer what must be occurring in action.

Weber ([1921–1922] 2019:90–91) faced a similar situation a hundred years ago. At the time, he feared that sociology, distinct from cultural science in the mold of Wilhelm Dilthey, would fail to understand its units of analysis as probabilistic constructions, thus systematically producing a “conceptual realism.” Practitioners of the nascent discipline, Weber noted, would then mistake a provisional orientation to their explanatory objects for prevailing assumptions about their Objective Possibility. For Weber, probabilistic sociology offered a different course, although it required interpretation and probability become *allies* rather than antagonists. The lesson for our present discipline should be clear. Sociologists need not bracket probability as an exclusively methodological concern or put data-centric knowledge of frequencies at center stage. Instead, probability can be retrieved directly from social action, as a privileged way to both understand and theorize it.

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NOTES

1. As Dahrendorf (1979:62) once noted, despite the “more than one hundred places” in the first part of *Economy and Society* (*E&S*) that Weber “uses *chance* as a word or a category, one cannot but be surprised about how little attention the literature on Weber has paid to the term.” The recent publication of the first part of *E&S* in a new translation by Keith Tribe makes abundantly clear, for the first time to Anglophone readers, Weber’s “relentless use of *Chance*” (Tribe 2019:65), a term so common in the text that Tribe leaves it untranslated and always capitalized and italicized. We follow the same convention here, as well as following Weber’s **bolding** of certain words for the purpose of emphasis.
2. This antagonism is axiomatic in contemporary sociology, mapping onto various methodological distinctions such as qualitative versus quantitative, statistics versus words, or meaning versus prediction (Collins 1984; Watts 2014).
3. This was the only section of Weber’s presumed magnum opus whose finished proofs Weber checked and revised before his untimely death in 1920. Notably, the German word “Chaos” drops out of the *E&S* text, although it plays a significant role (as we expand on in the following work) in Weber’s earlier work, particularly “The ‘Objectivity’ of Knowledge in Social Science and Social Policy” (see Weber [1904–1905] 2012:117–18).
4. Tellingly, Weber ([1921–1922] 2019:78) draws our attention to Simmel in the first passages of *E&S*: “I deviate from the method of Simmel adopted in his *Soziologie* and *Philosophie des Geldes* in that I make as clear as possible a distinction between **intended** and objectively **valid** ‘meaning’ a distinction that Simmel not only sometimes fails to make but often deliberately allows to run together” (see also Weber [1913] 1981:179, Note 1). In accusing Simmel of mistaking social forms for particular contents, Weber betrays a commitment to a more formal approach to sociology than has generally been appreciated.
5. Although previously noted in scattered form by some commentators, Weber’s probabilism has still not been given the treatment it deserves. In work published in English, Stephen Turner and Regis Factor in the 1980s stand as pioneering in noting the implications of the connection between Weber and

- nineteenth-century probabilism in Germany, most centrally the work of Johannes von Kries (Turner 1983, 1986; Turner and Factor 1981). Recent work by Ringer (2002, 2004, see particularly 2006) draws out the implications of such a connection for Weber's approach to historical methodology. Isaac Reed (2011:141, Footnote 37) also takes note of Weber's use of the concept of "objective possibility" and reliance on von Kries (following Ringer 2004). Reed does not link Weber's probabilism to his interpretive sociology, instead referring to *The Protestant Ethic and the Spirit of Capitalism* as interpretive sociology's signature example. Weber, however, does not appear to have explicitly linked his interpretive sociology to that text (for a similar observation, see Bargheer 2017). One surprising exception comes from the (so far unnoticed) deep influence of Weber's probabilism in Pierre Bourdieu's ([1980] 1990) practice theory. Bourdieu took notice of Weber's probabilism before Dahrendorf, particularly objective *Chance* and the "decoding of objective intention," drawing from a 1922 version of Weber's 1913 *Logos* essay (Weber [1913] 1981). For an extended discussion of Bourdieu's brand of probabilism, which builds directly on Weber's, see Strand and Lizardo (2021).
6. For an early version of the Weber/interpretivism linkage, see Wagner (1963:739).
 7. Geertz and Parsons are not the only ones to claim a "Weber" and use this as a launching pad for a theoretical framework (for additional sociological Webers, see, e.g., Bellamy Foster and Holleman 2013; Collins 1986; Hilbert 1987; Swidler 2000). None of these Webers, however, closely resemble Weber the sociologist, as found in the completed chapters of *E&S* (or "mein soziologie," as Weber himself characterized it; see Tribe 2019:78). In part, the probabilist Weber we recuperate was obscured by Parsons's (Weber [1947] 1964) initial translation of this work (included as the first four chapters in all editions of *E&S* until now) that each of the different Webers in contemporary sociology rely on (see Tribe 2007). Even the more noteworthy criticisms of Parsons's Weber (see e.g., Cohen, Hazelrigg, and Pope 1975) in Anglophone sociology rely on Parsons's problematic translation of the text.
 8. Throughout this article, we capitalize the probabilistic terms "Objective Possibility," "Objective Probability," and "Adequate Cause" to emphasize them as technical, analysts' terms, or ways to represent and infer "the existence of specifiable *Chance*" and not to confuse them with empirical objects we can directly observe, such as subjective expectation qua anticipations of sanction for breaking written rules.
 9. See Du Bois (c. 1946, [1905] 2000) for further examples of probabilistic language (e.g., "hypothesis," *Chance*, sequences) applied as action-theoretic rather than statistical terms.
 10. We find the first evidence of Weber's turn to *Chance* to build an interpretive sociology in a programmatic essay written in 1913 for the journal *Logos* (referred to hereafter as the "*Logos* essay") and in the finished first chapters of *E&S* (Weber [1913] 1981, [1921–1922] 2019). Weber leverages basic principles of von Kries's (1886) philosophical writings on probability (for an accessible introduction, see Zabell 2016) to frame sociology as a conceptually distinct scientific endeavor (Wagner 2020:452).
 11. We thank an anonymous reviewer for helping us puzzle through this.
 12. On these points, it is worth mentioning the influence of Nietzsche as finding an "ancient, Chancy universe" without a final state, in contrast to the seemingly settled (or slowly settling) universe, conducive to a priori categories, presented by German idealism (Deleuze [1962] 1983:25; Fleischmann 1964).
 13. As Weber ([1913] 1981:159; italics in original) notes, "[a] most understandable and important basis for the explanation of action... is the *objective* existence of... [(subjectively) assessed] probabilities, i.e., a greater or lesser degree of probability as exposed in a 'judgment of objective possibility.'"
 14. As Berger and Luckmann (1966:51) note, "the institutional order... is continually threatened by the presence of realities that are meaningless in *its* terms... the institutional order is... faced with the ongoing necessity of keeping chaos at bay."
 15. Of course, a "linguistic academy" can arise via a planned association of people, imposing explicit "rules" of linguistic expression (as with the *Académie Française*). This constitutes a transition from "consensual" to "associational" action (Weber [1913] 1981:171). Nevertheless, the underlying probabilistic situation does not change—speakers are still oriented to Objective Possibility—but the mechanisms accounting for predictability and shaping such possibilities are different; in the first (consensual) case, an orientation to *Chancen* generated by the decentralized action of a multiplicity of people and in the second (associational) case, an orientation to Objective Possibility generated by the common meaning attached to the rules by others and the probability they will continue to take the rules into

- account. Note that Weber ([1913] 1981:162) would allow for orientations to multiple orders at the same time so that today, we can say French speakers consensually orient to the Objective Possibilities generated by both the decentralized community of all French speakers *and* associationally orient to the Objective Possibilities generated by the explicit rules of the *Académie* in their routine reproduction of the French language.
16. A relevant contrast in this regard is flirtation, for which possibilities are deliberately kept open and never “actualized” in a way that would exclude some from looping into our orientation (Tavory 2009). The same is not true for the social relationship involved in “making music together,” at least when we have musical notation. Once that loops into our orientation, it dictates what *should* happen next and what is and is not possible (Schutz 1951).
 17. Here, probabilistic constructionism finds a parallel in Latour’s (2003) “constructivism.” While Latour’s approach is also continuous and fluid in its “flatness,” it finds no equivalent to Objective Possibility and therefore essentially features no coherent action theory.
 18. See Weber ([1913] 1981:153, 159, 162, 169–170; [1921–1922] 2019:78–79, 88, 100–101, 103).
 19. Weber ([1905] 2012:177–78) distinguishes probability from “precisely quantifiable probabilistic regularity” not to mistake the two, as probability in this last—today called “frequentist”—form remains, notably, “unintelligible” and incapable of informing expectation. Following von Kries, Weber distinguishes probability proper from the means used to give it a quantified meaning because this requires categorical distinctions to create equiprobability. Weber’s general point becomes all the more striking once this context is considered. Weber (at least incipiently) shows us a way of drawing probabilistic expectation into action without diminishing our concern with the interpretive explanation thereof. This is particularly clear in how Weber uses the quoted phrase “judgment of objective possibility.” He does so (1905 [2012]:182) in 1905 to explain Adequate Cause in the same essay in which he admits to “plundering” von Kries. He repeats this same quoted phrase (Weber 1913 [1981]:159; see also Weber [1921–1922] 2019:86) in the 1913 *Logos* essay. As far as anyone can tell, this quoted phrase comes directly from von Kries (see Pulte 2016).
 20. A criticism of John Stuart Mills’s method of agreement and difference was baked into von Kries’s revision of probability (Keynes 1921:275–76).
 21. Weber often uses the term “fluid” in *E&S* to characterize movement between and blurring of distinctions between abstract types (see Weber [1921–1922] 2019:100, 109–110, 125, 159, 163, 221, 361, 399, 451).
 22. This could include “cheating” or “breaking the law,” both of which presuppose an expectation oriented to objective possibilities, often as rules or laws (Weber [1913] 1981:161; see also Weber [1921–1922] 2019:113).
 23. In Weber’s ([1921–1922] 2019:88) examples, “events lack[ing] meaning” include things like mortality, fatigue, rainfall.
 24. In logistic regression modeling, the “log odds” are the (logged) ratio of the probability p of an event occurring and its reciprocal, namely, $\log[p / (1 - p)]$.
 25. The philosopher Alva Noe (2015: Chapter 4) remarks on a similar phenomenon as “art loops.” If our bodies are capable of dance, choreography is a differentiated space in which certain conceptions of dance loop back into the body movements and make only some objectively possible as “dance.” This can change as choreography changes. The same is true for music, painting, and writing, for instance.
 26. We are not the first to recognize this. Bourdieu ([1980] 1990:63) and Dahrendorf (1979:73) also do.
 27. Learning “an average” without frequency counts or real numbers might have seemed implausible to past attempts to make sense of Weber’s probabilism (Turner 1983:513), but it aligns with learning mechanisms now proposed by proponents of the “predictive turn” in cognitive science (see Williams 2018).
 28. This is a central postulate in Parsons’s normativist functionalism (see Silver 2011).
 29. As Weber ([1913] 1981:162) notes, “the empirical ‘validity’ of an order . . . [is] the probability [*Chance*] of its being ‘complied with’. That means . . . associates, on the average, count on the probability [*Chance*] of order-oriented behavior on the part of others, just as they also, on the average, regulate their own action according to the same kind of expectations held by others.”
 30. Weber’s ([1904–1905] 2002) account of the Protestant Ethic demonstrates loosely similar points of emphasis. Only religious conceptions, formed within a socially differentiated space and also fixing

Objective Possibility through conception, could break with feudal domination. Richard Lachmann's (1987:11) observation seems telling in this regard: For Weber, only with the "external ideological shock from a Protestant Ethic" could the "chronic inelasticity" of feudal domination ever have been broken (see also Collins 1997). But (pace Habermas 1984:216) the typical orientation that appeared could not remain as a "conception of order" (as it was for Calvin and Luther; Weber [1904–1905] 2002:53, 78, Chapter 3) for the Protestant Ethic to exercise societal transformation (e.g., move "out of monastic cells into everyday life"). To be an Adequate Cause on such a large scale, conceptions had to become sanctions by rule makers (e.g., pastors) that removed certain expectations from subjective decision (Weber [1904–1905] 2002:54–55, 103). "Work in a calling" became the (practical) orientation to the possibility of predestined eternal damnation or salvation, testifying one's saved status to others (Weber [1904–1905] 2002:74–75). The effect was to create a highly motivating "psychological premium" (Kalberg 1996:61) for those who knew little about the "rational foundations" of the possibilities they so desperately feared. Ultimately (in figures like Benjamin Franklin), they lose the association with religion entirely (Weber [1904–1905] 2002:17, 102).

31. Interpretivism, for its part, keeps a respectful distance from Weber's analysis of power.
32. Weber ([1921–1922] 2019:105) is radically probabilistic when it comes to the ontology of social relations: "[I]t is **only** the existence of this *Chance*—the greater or less **probability** that action corresponding to this meaning takes place, and **nothing** more than this—that signifies the '**existence**' of the social relationship."
33. Note we can easily extend the same reasoning to "supra-statal" ruling organizations such as empires (Go 2009). Like states, empires can be conceived as ruling organizations striving to monopolize the legitimate use of physical coercion throughout the globe, which may include impinging on local monopolies exercised by other states.
34. It is not by mistake that early boosters of data science set about attacking "theory," referring to it as just another word for "missing data" (Anderson 2008).

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