Inequality and process

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In this paper, I consider the concept of inequality. I begin with the ambiguity of this concept as customarily deployed in American sociology, arguing that when we say "inequality," we usually mean "injustice." I then outline some problems in sociological thinking about injustice, first considering measurement issues, then ontological ones. Since the social theories of the Enlightenment prove to be too limited for the second of these discussions, I invoke a processual social ontology that emphasizes certain particular problematics for sociological concepts of injustice. In conclusion, I present a simple American example that effectively captures these problematics, offering that example as a puzzle for further reflection.

1   The Inequality Concept in American Sociology

Let me begin by discussing the concept of inequality as it is deployed today in a typical part of the American stratification literature – intergenerational class mobility. Journals annually publish many articles examining the probabilistic advantages enjoyed in intergenerational transition by families of high socioeconomic status, education, ancestry, race, and so on. While these articles never substantively define "inequality," its operational meaning is quite specific. "Inequality" means that in linear models predicting social outcomes in the second generation, the coefficients on such things as socioeconomic status, ancestry, and race are significantly different from zero. By implication, equality is the state of affairs in which these coefficients are not significantly different from zero.

While this implicit definition of equality can be logically inferred from our quantitative practices, it is not very helpful. First, inequality is built cumulatively from the very beginning of the life course. The most deprived classes in liberal

societies suffer enough damage even in the first six years of life to create virtually unbridgeable deficits. To guarantee insignificant coefficients in intergenerational predictions of outcomes at midlife, we would have to take children from parents at birth and raise them under arbitrary conditions. This is a social intervention that no large scale society has ever attempted and that has almost uniformly been seen as dystopic by writers of literature, science fiction, and social science.

Second, the very things that sociologists of inequality typically wish to see preserved in the face of intergenerational stratification – minority group cultures, alternative social practices, subaltern languages or religions, different tastes and desires – are maintained largely through parental influence. For example, when American sociologists of inequality argue that children of English-speaking parents have an unjust advantage over children of Spanish speakers, what they really mean is that they believe it to be normatively preferable that immigrants be able to preserve their language and culture. Yet the main causal underpinning of this preservation is the family, which as just noted also has the socially undesirable quality of reproducing inequality.

Thus, while nearly everyone in American sociology is upset about inequality, most of us think about it in a somewhat inconsistent manner. We decry inequality, but do not actually believe in the radical egalitarianism that our usage of the word "inequality" implies in the limit.

In practice, of course, we disregard this limiting case of insignificant intergenerational class transmission and focus on the question of decline in the coefficients. That is, we evaluate whether class status or some other measure of personal outcome in the second generation becomes over time more and more independent of class status and personal outcome in the first generation. We thus speak of "improvement in these coefficients over time." And this approach makes good sense. When incomes in a society vary by a dozen orders of magnitude, we need not worry about the impossibility of absolute equality. Similarly, the old Schumpeterian argument (1950) that socialism will fatally weaken motivation does not apply when we have income distinctions that are thousands of times as large as those necessary to avoid such a lack of motivation. In sum, our societies are so far from equal outcome that the limiting case does not matter. Any progress towards equality is welcome.

But beyond this practical justification, there is actually a much simpler and purely linguistic reason for our inconsistency. In most American sociology, the word "inequality" does not actually mean "inequality," just as the word "minority" does not mean a numerical minority. (It is sometimes used for women despite their numerical majority in the population.) Rather, the word "inequality" in American sociology is simply a euphemism for the stronger and more general word "injustice."

This fact of euphemism becomes clear when we think about the different interpretations put on intergenerational prediction coefficients by economists and sociologists. What is "inequality" for the sociologist is "investing in human capital" for the economist. Their analyses may be exactly the same, but the interpretations differ precisely in whether the analyst thinks the identified disparity is a bad thing or a good thing. And indeed interpretations of nonfindings differ as well. For most American sociologists a failure to find significant effects of class or gender or race on intergenerational outcomes would indicate a failure of measurement or specification. By contrast, many American economists would take such a failure as evidence of justice.

One can see the historical emergence of sociologists' euphemistic preference for "inequality" over "injustice" by considering the frequency of the words "inequality" and "injustice" over time. The longest continuous and consistent data series we have is the articles published in the American Journal of Sociology. The following short table gives the number of articles containing the indicated word for the century from 1895 to 1995 by decade.

Tab. 1

	Inequality	Injustice
1895 – 1905	38	59
1906 – 1915	20	48
1916 – 1925	30	46
1926 – 1935	13	10
1936 – 1945	9	17
1946 – 1955	14	9
1956 – 1965	15	6
1966 – 1975	57	13
1976 – 1985	153	18
1986 – 1995	168	15

In the first thirty years of the Journal, editor Albion Small made it a mouthpiece for Progressivism. As a result, both topics were important, but injustice was the more important. From 1926 to 1965, American sociology scientized, and both words disappeared. Indeed, a reading of the actual articles including the word "inequality" in those years shows that the word appears much of the time in formal mathematical expositions. After the political upheavals of the 1960s, however, the use of the word "inequality" rapidly increases, particularly in relation to "injustice."

The AJS published about 35 papers a year in the final decade shown here, so the word "inequality" appears in roughly half the articles in that period. (It has surpassed 50% in recent years.) Indeed, one can infer that "inequality" – primarily in the meaning of "injustice" – constitutes the principal topic of American sociology.

This usage parallels the evolution of American politics. The Civil Rights agitations of the 1960s established the victimization model of politics, which married America's longstanding politics of interest groups with a new basis of "interest" – discrimination. Almost by definition, social science was central to that political model. The employment of social science in the 1954 Brown decision showed the Supreme Court's willingness to allow injustice to be measured as an empirical fact in addition to its traditional assertion through purely legal argument. When groups such as women, Hispanics, the aged, and the handicapped followed the African-American innovation, their level of social equality also required ongoing scientific evaluations. On the one hand, such evaluations would reveal whether America had "equal opportunity" and on the other they could appraise such controversial egalitarianist policies as affirmative action. Moreover the Supreme Court made it clear in the 1973 ATT case (on wage discrimination by gender) that purely statistical evidence of discrimination would be accepted as creating a right of redress. There was now no need to demonstrate intent, which had previously been the standard test of most legal analyses of harm. As a result, sociology could become a site for social democrats to lob statistical bombs at a system perceived as conservative.

In summary, the word "inequality" in sociology usually conveys a political judgment, rather than an empirical one. It thereby enables people in sociology and the kindred social sciences to talk about that thing which a century ago our Progressive predecessors would not have hesitated to call "injustice," but it enables us to discuss "injustice" in a way that sounds scientific rather than moral or political. And by so sounding, it evades the immediate surveillance of the dominant forces of society, which are often interested in perpetuating precisely that social situation that many sociologists think is unjust.

2   The Measurement of Injustice

Once we recognize that "inequality" in American sociology actually means "injustice," we can ignore the problems that arise from defining equality simply as absence of all inequality. Injustice is a more general concept than inequality, and justice can involve forms of inequality in the literal sense. (For example, few

people think the status difference between parents and children is unjust.) In practice, the next important question might concern which kinds of inequalities of status are incompatible with justice. But this is a political question I wish to set aside. Rather, I am interested in asking about the sociological requirements of a concept of justice per se. Although I have already noted the failure of the "no inequality" concept in the limit, I have not specified other issues that might affect the sociological soundness of various concepts of justice (equality among them). In the remainder of the paper, I shall address two broad sets of such issues. The first and simpler are measurement problems. We are familiar with some of these, and they provide a useful beginning for that reason. The second and more difficult are ontological issues, and more particularly those ontological issues concerned with the embedding of social life in time.

I shall begin my consideration of measurement problems with questions that are already somewhat familiar from debates about existing measures and indices. They concern the normative implications of assumptions about "measuring" justice: questions of linearity, combination of scales, and creation of general measures. Note that I am not interested here in the scientific problems of these aspects of the measurement of injustice, but in the normative implications and assumptions of that measurement. This parallels the approach I took thirty years ago in my paper on "general linear reality" (Abbott 1988), which focused not on the scientific problems of modeling (as so many readers incorrectly thought), but on the ontological and philosophical assumptions made by the general strategy of linear modeling. The present situation is similar. There is a distinguished literature on the scientific problems of measurement of inequality, and I am happy to acknowledge it. But I want here to view those measurement problems in a normative light.

I begin with the simplest matter. Imagine for the moment that we have well-defined units (people, societies, social groups). Injustice among these units is logically a comparative concept; we say the relation of two groups is unjust because we have compared them and found differences. (Thus, I am not discussing here acts of injustice, such as enslavement, oppression, swindling, etc. That branch of the theory of justice does not usually involve the word "inequality," but something much stronger.) Comparison implies the existence of pairwise data specifying whether the relation of group A and group B is just or unjust. This is a very general data form – a "justice matrix" of pairwise comparisons between groups. In most of our practical applications, however, injustice is expressed in a much more specific form: a linear scale like income, well-being, probability of advancement, returns to education, and so on. The enticing power of inferential statistics leads us to make the strong assumption of linear order for our indicators, and, willy-nilly, for the unmeasured underlying concepts as well. There are really two assumptions here

about the normative world: first, that the "justice matrix" can have its rows and columns permuted until most or all the "just" comparisons lie above the diagonal and most or all the "unjust" ones below; and second, that we can define a quantity metric on justice such that we can consistently "measure" distance between positions in the order provided by the first procedure.

But there is no theoretical reason to think that most types of injustice have these properties. The second assumption is very strong and is made simply because it seems implicit in the existence of linear scales of things like income. But of course since a given income will purchase different amounts in different places, assuming a linear order to income has major problems – what we are really trying to measure is individual well-being, not the wherewithal to seek that well-being. Moreover, the justice matrix may fail to meet even the first criterion of permutability. The proper response to these problems, of course, is not a statistical fix-up to turn something inherently non-linear into a linear approximation, which we then treat as a sufficient measure. A wiser choice would be to avail ourselves of the arcane but quite highly developed body of algebraic tools for talking about non-linear orders. The majority of what we regard as linear scales of inequality are in fact a type of semiorder: relations of the form "A is about as rich as B." Such relations – formally called tolerances – are reflexive and symmetric, but not transitive. They give rise to loose, overlapping sets in an acyclic order, but do not permit the powers of our customary statistical models. If we are to be more creative about a formal approach to theories of injustice, we need an inference system for such tolerance orders, not simply ways to linearize things that are not inherently linear.

A second familiar measurement problem arises not in conceptualizing a single scale, but in mixing scales together. We often create our measures of injustice by mixing different kinds of comparisons into composite measures – typically via additive scale construction, factor analysis, or some other means. But no more than linearizing are such techniques normatively innocent procedures. Factor analysis, for example, treats the core of injustice across a set of measures quite specifically as the line maximizing captured variance across the measures in N-space. But this procedure assumes that there is a conceptual "weighting" of the various measures being synthesized such that all the measures are of equal conceptual importance and, furthermore, that they possess in some sense variances that are "conceptually of the same weight," since variance capturing is the essence of factor analysis. That we can "standardize" our variables (and their variances) does not mean that we have somehow escaped normative choices about our data. We have simply refused to make those choices consciously and have let our choice of relative scales of measurement make the normative choices for us on unexamined grounds. The algorithm itself weights variables in terms of "information," which means that in

effect it imposes its own weighting, privileging variables that are largely orthogonal to others. Nor is there any reason other than convention for treating standard deviation as a normatively neutral unit of spread, since we could have used any of the even-numbered Minkowski metrics for that purpose and in any case the normative importance of a given spread, even for standardized variables, depends upon the true (normative) "shape" of the underlying concept, not on the various statistical functions of that shape.

A third type of problem arises with summary measures of injustice across a whole society. For this purpose, we do not create pairwise measures of injustice, but composite ones – the Gini index is the most familiar. But summary measures have their own assumptions about what is just and unjust, as we see from debates over measures like the Atkinson index, which can weight inequality differently in different portions of the income distribution. These debates are indeed a healthy sign of normative theorizing in social science. But we should be conducting such debates not as if the stakes were simply scientific, but as if the stakes were themselves normative. We should be reflecting on why justice requires that we focus on inequality in a particular part of the distribution.

The familiar problems of linearity, additivity, and generality are thus not only practical issues about the measurement of injustice, but also normative questions. But beyond these familiar issues lies a second level of measurement questions, issues that arise in the very project of measuring justice and that are perhaps less familiar.

First, to the extent that we place equality at the center of our concept of injustice, we must recognize that in most probabilistic systems equality is a very unusual event. Suppose we have 100 equivalent and indistinguishable bits of welfare and we distribute them at random among 20 different people. The probability that all the people have exactly five bits of welfare is about one in 10 to the 13.7th power. Even the number of arrangements in which no unit contains more than six or less than four bits of welfare is only a tiny fraction of this heroic total. Since this extremely rare perfect equality is our usual null hypothesis, it is not surprising that we find inequality everywhere (although it is important to note that what we find is patterned inequality rather than random inequality). There are, to be sure, physical conditions under which equality "naturally" arises. Gas pressure in a closed volume is equal at every point, for example. But this happens because kinetic forces lead randomly moving molecules to immediately fill any relatively empty part of the volume. By contrast, bits of welfare do not move rapidly and randomly through a largely vacant social space. Moreover, they are consumed, not indestructible. Even more important, the kinetic energies of individual gas molecules vary widely; it is only in the average – the pressure measure – that there is equality. Only in rigid systems like crystals is there uniformity and equality. And the human social system

is not by any means rigid. So there is no escaping the disturbing fact that the typical random state of affairs is inequality, and that equality is not a sensible baseline for statistical inference about social life.

The second more general measurement problem returns us to the broader focus on injustice. It is not clear what is entailed by the assumption that injustice can be measured and whether those entailments are conformable with the usual rules of normative argument. In formal terms, measure is a function assigning a real number to an arbitrary subset of a metric space. Such a "measure" is defined in terms of "lengths" of open and closed sets that respectively contain or are contained by the set measured, and length – as the name metric space implies – presumes a metric. But mathematically, a metric is a quite specific form of binary relation, associating with any two points in a set a real number that is subject to three requirements: that metrically indiscernible points be identical (metric zero from each other), that the metric be symmetrical between points, and that it obey the triangle inequality.

But it is by no means clear that all or even most aspects of justice (or even of social life generally) are measurable and metric in this sense. Do we think, for example, that a relation of justice must be symmetric? Louis Dumont (1970) argued that the inclusion relationship was the foundation of the traditional Indian hierarchy, which Indian traditional society took to be just and legitimate (at least in his view), and which he contrasted with Western concepts of "stratification" as a linear order. Yet "A includes B" is not a symmetric relationship, although it is a transitive one.

Or again, do we think that injustice obeys the triangle inequality – that the degree of A's injustice under C must be less than or equal to the sum of A's injustice under B and B's injustice under C? Yet many stratification systems have intermediate brokers who are thought to maintain relatively just relations with subordinates on the one hand and superordinates on the other, even while the distance of those sub- and superordinates from each other is virtually infinite. Of course, when we impose linear scales on these relationships – as has been done with occupational prestige and many other scales, for example – they automatically become metric scales. But that we usually think about justice using inequality measures that presume metricity is not a reason for assuming that metricity exists for the normative aspects of the actual social world.

Another version of this problem is the old question of whether there is not one form of injustice that matters more than all the others. At many times and places, various dimensions of human life – typically religious, but also nationalistic or racial – have been regarded as infinitely important. Yet such unbounded importance cannot be measured and in effect divides the social world into completely separated equivalence classes, with a trivial metric of membership versus non-membership separating all classes. More generally, one can think of this as a commensuration

problem. People have multidimensional senses of the importance of their many diverse concerns, but few normatively accepted ideas about how to compare them. Absent those, we are returned to the normative know-nothingism of factor analysis and its cousins. In summary, no matter how we phrase it, there is an enduring question whether all types of justice involve relations that are in principle metrizable, much less co-metrizable.

This issue of metrizability is a profound one. It could be that the central idea of normativity is non-metrizability. What makes something normative in character might be precisely its inability to be measured. As Duncan (1984), Desrosieres (1998), and many others have argued, modern culture has in general assumed that all social aspects of social life can be measured. This assumption is implicit in early concepts like life insurance, but was later turned into a broad, if implicit ideology in the spread of operations research into political decision-making in the 1940s and 1950s and the use of discounting to bring into our current social accounts such unknowabilities as the welfare of future generations. This universal possibility of measure was made explicit in the daring work of Gary Becker (e.g., 1976), which rests on the idea that we can always measure the value of something for an individual simply by the price of the (measured) resources that individual is willing to sacrifice for it. It is clear that this is tautologically true on some definitions of value – in particular, the definition that is standard in economics.

But such an operational definition of value remains only an assumption, an ideology. Even David Ricardo thought value had two sources – not just scarcity and exchange, but also labor – human activity. And Ricardo's ambivalence remains. Most of us in sociology assume that true value is not defined operationally, as "whatever results from the act of measurement." Rather, most of us assume that measurement must always be considered an indirect approach to justice, which is itself something elusive and in the last analysis not perfectly capturable. Indeed, it may also be that that infinite fertility of justice – the ability to find new dimensions and aspects of it – is what marks it as a concept. It is, in Maine's terms, a matter of status rather than contract. And if that is the case, if justice is in principle immeasurable and indeed not finally determinable at a moment, then the we can no longer trust the approach – mathematical and operational – that we have taken to injustice in the guise of inequality.

In summary, the two abstract problems of measurement are: first, that equality itself is an extremely rare condition and, second, that normativity may definitionally entail immeasurability or, at the least, a measurability that is time bound because of the infinite novelty of potential justice claims. Our practice witnesses to a certain recognition of the second problem, for we typically believe numerical equality to be a legitimate measurement approach to some aspects of justice but not to all.

The obvious justice "measures" are things like income, wealth, and mortality that are already expressed in measures common across all people – recognizable commensurations that we have all come to accept, at least in advanced liberal societies.

But there remains the desire to measure justice in other, less obviously measurable things: success, feeling of accomplishment, life satisfaction. Yet here, beyond the simple problem of measure itself, is a third issue: these less measurable arenas of justice are subject to variation in the people themselves, for success for person X must be success in something that person X wants to accomplish, and satisfaction for person Y must be satisfaction in terms of the good life as conceived by person Y. Thinking about injustice then involves us in strange rules of commensuration that allow us to compare years of person A as a janitor with years of person B as a salesman, rules that may or may not take account of personal preference and character, skill match, and other such factors. And, even worse, these "personal" qualities of the individual whose inequalities we seek to know may be subject to "false consciousness;" an individual's desires may stem from external forces – advertising or hegemonic ideology or whatever. We feel that we should define his "success" in the terms in which he would define it if he were free of those external forces. But what are those terms?

When we reach these kinds of questions, we are beginning to challenge not so much our idea of measuring injustice as the nature of the social world as we imagine it. For by distinguishing personal qualities, we start to move away from the political theory of independent and identical abstract citizens that emerged from the Enlightenment and from which grows our ideology of justice as pure equality. More specifically, we must question the basic social ontology on which those political theories were built.

3 Ontological Preliminaries of Justice

A useful way to understand the social ontology implicit in our debates about injustice is to examine the long debate about equality of opportunity. As this phrase suggests, there are two basic ways to think about how equality/justice might be achieved. One way is to simply equalize rewards to any position in society, to create what the French would call equality of places (Dubet 2010), or what might in English be called equality of result. Equality of result means the lessening (across all positions) of positional differences in salaries, conditions of life, and access to services and security. By contrast, equality of opportunity means that everyone in the society has an equal chance at all forms of achievement, but in a system of

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