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# Objectivity of Measurement in Political Science

## Abstract

A recent dispute in political science raises issues about the objectivity of measures of democracy. Political scientists Little and Meng argue that democracy indices using country experts as coders show a greater degree of democratic backsliding than measures that are objective. They worry that this discrepancy may reflect coder bias. I distinguish three aspects of objectivity and offer a reconceptualization of objectivity as *coherence objectivity*. I argue that coherence objectivity is better suited for evaluating measures of social science concepts like democracy than the understanding of objectivity implicit in Little and Meng's discussion.

# 1. Introduction

Forms of government, regimes, and regime change are major topics of interest in political science. Recent electoral politics in both the United States and elsewhere have added to an already extensive literature on the nature of democracy, including widespread investigation of democratic backsliding or erosion (e.g., Bermeo 2016, Diamond 2015, Haggard and Kaufman 2021, Levitsky and Ziblatt 2019, Lührmann and Lindberg 2019).<sup>1</sup> Credible claims about the extent to which democracy is under threat require evidence to support them. Such evidence frequently revolves around assessment of just how democratic nations are and so involves measurement – specifically the use of democracy indices such as those produced by the Polity Project, Freedom House, and the Varieties of Democracy Project (V-Dem). Not surprisingly, there are debates about which indices are best for which purposes and what these various indices show. Each approach uses a somewhat different mix of indicators and different methodologies. In recent years, V-Dem, the newest of these, has been widely, although not universally, adopted by researchers, replacing Polity as the most frequently used.

Early in 2023, political scientists Andrew Little and Anne Meng circulated a paper that proposes that worries about democratic backsliding may stem from researchers using indices that rely on experts to code the indicators of democracy. They suggest that this subjective element might result in an exaggerated evaluation of the extent to which democracy has eroded globally. The paper sparked a lively conversation among political scientists since so many make use of these indices in their research. The result was a special issue of *PS: Political Science and*

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<sup>1</sup> I use democratic backsliding and democratic erosion as synonyms as do Little and Meng.

*Politics* (2024) and a 2023 American Political Science Association (APSA) meeting panel composed of contributors to that issue.<sup>2</sup>

The discussion in both venues raises a number of issues that are philosophically interesting. In this paper I explore one such issue – the question of the objectivity of measures of democracy. I consider the challenge that Little and Meng pose to democracy measurement projects that make use of expert coders and I use the debate to offer an alternative account of objectivity for measurement– *coherence objectivity*. I argue that this account provides a better way of thinking about the measurement of many social science concepts, such as democracy.

In Section 2, I outline Little and Meng’s critique and give some background on V-Dem. I focus on V-Dem as an example of a measurement project that makes use of expert coders and so is a target of Little and Meng’s critique. Section 3 explores three aspects of objectivity relevant to the debate (agent, methodological, and ontological) and focuses on the third as the key concern for this discussion of measurement. Section 4 proposes *coherence objectivity* as an alternative account of objectivity and Section 5 argues for its virtues in the context of this debate.

## 2. Little and Meng’s Challenge

Our primary contribution is to highlight and explore the consequences of a key distinction between different democracy indicators. Some are objective and factual, such as whether the incumbent party loses and accepts defeat in an election. Other indicators are subjective and rely on the judgment of expert coders to answer questions such as whether a particular election can be

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<sup>2</sup> The recording of that panel is available at <https://www.cambridge.org/core/journals/ps-political-science-and-politics/special-collections/democratic-backsliding>.

considered ‘free and fair’. (Little and Meng 2024a, 1)<sup>3</sup>.

Little and Meng begin by noting what they take to be a significant difference among various indices that they believe may damage the conclusions that scholars draw about democratic backsliding. While they acknowledge that “subjective” indicators that use expert coders have some advantages in that a much wider variety of information can be gathered, they argue that the downside is that there is a greater potential for subjective bias.

To investigate this concern, they take a “quasi-minimalist” conception of democracy that relies on indicators that they deem objective – such as whether there are elections that produce a turnover in government. Little and Meng also consider constraints on executives, free media, and rights and protections, thereby expanding the minimalist conception, since a strictly minimalist account, such as one that identifies democracies with regimes that have contested elections, is generally considered too be too inclusive.<sup>4</sup> They use indicators from available sources of data such as National Elections Across Democracy and Autocracy (NELDA) and Database of Political Institutions (DPI) and present an analysis in which these objective indicators do not show the level of backsliding claimed by scholars who use indices that have data coded by country experts, as V-Dem does.

Little and Meng aggregate the data from these various sources to create what they term an “objective index”, which they use as a guide to gauge the trend in democracy over the covered

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<sup>3</sup> The pages cited are for the online version of the special issue. The print issue is forthcoming.

<sup>4</sup> The minimalist account produces a dichotomous sorting of regimes into autocracies and democracies. The emergence of so-called hybrid regimes that combine elements of both challenges this dichotomy.

years.<sup>5</sup> Their index shows a rise in the average level of democracy after the Cold War, as do all the indices they examine. There is slower but steady increase from around 2010, diverging from a slight decline in democracy for Freedom House and V-Dem, followed by a brief upturn and slight decline during the next decade. V-Dem shows a downward trend during this same period. While Little and Meng note that the differences are really quite small, they argue that even these small differences can affect the conclusions scholars draw (Little and Meng 2024b).

Little and Meng point to two possible explanations for the differences in indices. The first is coder bias. They speculate that an increase in media attention to cases of backsliding and a general media hype about the issue may have influenced the perception of coders and ultimately this bias is transmitted to the indices in question. Another possible explanation is that their objective indicators reflect a conception of democracy that is too thin and so does not capture the real phenomenon of backsliding whereas these other indices do. They note that these explanations are not mutually exclusive.

To better understand the nature of the Little and Meng's critique some background information on indices that use expert coding is useful. To simplify, I focus on V-Dem. The project website describes V-Dem in the following way:

Varieties of Democracy (V-Dem) is a unique approach to conceptualizing and measuring democracy. We provide a multidimensional and disaggregated dataset that reflects the complexity of the concept of democracy as a system

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<sup>5</sup> They caution that this is not an alternative democracy index since the various sources use different techniques rendering the aggregation of data problematic, but they believe it is adequate to use as a heuristic to detect the overall trend.

of rule that goes beyond the simple presence of elections. The V-Dem project distinguishes between five high-level principles of democracy: electoral, liberal, participatory, deliberative, and egalitarian, and collects data to measure these principles. (<https://v-dem.net/about/v-dem-project/>)

The five principles noted are derived from the theoretical literature on democracy (political theory) and V-Dem identifies them with five different types of democracy: electoral, liberal, participatory, deliberative, and egalitarian (Coppedge et al. 2017, 42). These five conceptualizations of democracy are captured through surveying country experts for each of the countries represented in V-Dem. The survey questions are designed to assess the extent to which a state has institutions, structures, and practices that cohere with the associated principles and the answers to the questions result in values that are treated as indicators of the extent to which a regime qualifies as democratic under each principle (Coppedge et al. 2017, 25). For example, as one question used to code for free expression, experts respond on a Likert scale to “Does the government directly or indirectly attempt to censor the print or broadcast media?” (Coppedge et al. 2024, 207).

The country expert ratings are not the only indicators determining the resulting index values however. Altogether, V-Dem has over 600 indicators. The values for the expert-rated indicators are aggregated with the other indicator values – described as “objective” or “factual” - in order to produce the higher-level indices corresponding to each of the five principles. The result is that V-Dem produces not just one measure of democracy but five, corresponding to each

of the five principles.<sup>6</sup> V-Dem is in its 14<sup>th</sup> iteration – all country experts code for V-Dem each year – and each iteration has included an expanded number and types of indices that are available.<sup>7</sup>

These are the basics of V-Dem. It differs from previous indices in the number of indicators used, the techniques used to produce the values from the coding, and the way it makes use of experts as coders. Responding to Little and Meng, contributors to the special issue from V-Dem noted that the project uses a combination of subjective and objective indicators and that they rely on a wide-range of checks on intercoder reliability.

### 3. Three Aspects of Objectivity

There are a variety of issues that this debate raises for political scientists working on these issues and using these indices. The papers in the special issue responding to Little and Meng and the

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<sup>6</sup> All data, complete information about aggregation formulae, and other information about the methodology used are available on the V-Dem website (<https://www.v-dem.net/en/>). It is also worth noting that V-Dem presents all data in disaggregated as well as aggregated form on its website.

<sup>7</sup> There are over 4000 country experts in all. V-Dem tries to have at least 5 experts for each country. Most country experts reside within that country, although there are some experts, particularly in countries that are difficult to communicate with and where participation in the project may be hazardous for the coder (North Korea, for example) where experts are not from that country. While V-Dem is extremely transparent, they do maintain anonymity for country experts given that in some countries experts might be targeted if their coding was known to be unfavorable.

accompanying panel discussion at the 2023 APSA meeting cover many of them, but the issue that I will focus on in this section is at the core of the Little and Meng critique – concerns about objectivity that stem from the worry about bias resulting from the use of subjective measures.

The approach that Little and Meng take depends on a distinction between objective and subjective indicators. Most of the participants in this discussion acknowledge that a sharp or clear distinction is not always possible since subjective judgments are always involved in making choices about how to conceptualize democracy, which indicators to use, and how to aggregate indicators. Subjectivity of some sort appears to be ineliminable. Those who want to maintain the distinction acknowledge that such judgments need to be made but argue that indicators such as whether there are elections that result in turnover, how widespread suffrage is, and whether and how much legislation puts restraints on executive power are at least more objective than expert responses to survey questions like the V-Dem questions.

There are two main arguments given for maintaining the distinction between subjective and objective indicators. The first is a negative one. Abandoning the distinction would result in nihilism – the inability to claim that any measure is better than any other. But nihilism is not an inevitable outcome of a failure to make a distinction. Another, perhaps more conservative approach, would be to seek out better objective measures of the sorts of features of democracy that country experts provide information about.<sup>8</sup> A more radical tactic would be to

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<sup>8</sup> These options are not mutually exclusive and are probably not exhaustive either. The third option was proposed by at least one of the panelists at the APSA meeting, however, the proposal did not include suggestions about how to achieve this goal.



reconceptualize objectivity – a project that a number of philosophers of science have engaged in (i.e. Longino 1990, Montuschi 2021, Koskinen 2021).

The many ways in which objectivity can be understood has been a topic of analysis for many philosophers and historians of science (Lloyd 1995, Janack 2002, Douglas 2004, Daston and Galison 1992 and 2007). Rather than detail the various complexities of this discussion, I offer the following three senses of objectivity intended to capture the main ideas that have emerged from this literature.<sup>9</sup>

*Agent objectivity*, has to do with the qualities of epistemic agents or communities who are producing knowledge. In the case under examination, the epistemic agents are in the first case, the coders, although those who use the data for research and ultimately those who are consumers of that research are also epistemic agents. Traditionally, objective epistemic agents are thought to be detached, or able to distance themselves from any emotions, personal involvements, or other non-rational outside influences that might bias their investigation.

A second sense of objectivity has to do with the procedures or methods used to produce knowledge. Some methods, practices, and procedures are thought to be more reliable in achieving epistemic ends than others. This is *methodological objectivity*.

A third sense of objectivity might be called *ontological objectivity*, as it concerns the existence or status of that which we have knowledge of. When we say belief or knowledge is objective, we often mean that it gets something right about the object under investigation – that it latches on to the phenomenon in some way. In summary, “objective” is an adjective that modifies: 1) epistemic agents (*agent objectivity*); 2) the methods or procedures that we use to

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<sup>9</sup> The following typology of objectivity is from work done with Kristen Intemann and appears in Crasnow and Intemann 2024.

gather evidence (*methodological objectivity*); and 3) our accounts of the world (*ontological objectivity*). In this debate, all three come into play.

Consider the arguments discussed thus far. When Little and Meng question the objectivity of indices that use expert coders (like V-Dem) they begin with the subjectivity (and potential bias) of the expert coders and so are challenging the agent objectivity of the approach. But the use of coders is just one piece of V-Dem's methodology, which also includes indicators that are considered objective by the lights of Little and Meng.<sup>10</sup>

In addition, V-Dem aims to address expert bias—agent objectivity -- through a variety of techniques intended to produce methodological objectivity.<sup>11</sup> V-Dem attempts to address this through assessing the validity and reliability of their measures – standard criteria for assessing measurement. Measures are valid if they get the target of the measurement right and are reliable

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<sup>10</sup> For example, V-Dem's electoral democracy (polyarchy) aggregates: freedom of expression and alternative sources of information index (aggregate of media bias, print/broadcast media critical, print/broadcast media perspectives); freedom of association index; share of the population with suffrage index; clean elections (free and fair) index; elected officials index. Each of the indices is constructed using indicators for these component concepts. Some are objective, e.g., population with suffrage index.

<sup>11</sup> They compare responses to other extant indices where relevant; they test for intercoder reliability; they use fictional vignettes to norm coding. In addition, they provide measures of coder confidence for all expert coding and employ Bayesian Item-Response Theory to address concerns about expert bias and provide estimates of random measurement error (<https://v-dem.net/about/v-dem-project/>).

if they do so consistently. But validity and reliability are ultimately the standards of ontological objectivity – getting it right.

The question of whether V-Dem (or any other set of indices) gets democracy right is difficult to assess for a variety of reasons, but most importantly because democracy is a multidimensional and contested concept. Any account of ontological objectivity for measures of democracy should address the problem of how best to conceptualize and consequently operationalize the concept.

#### 4. Coherence Objectivity

It is not obvious how to assess validity in the case of democracy. While people do have some intuitions about what it means for a nation to be democratic, such intuitions are not on their own consistent enough to provide a standard of correctness of measures of democracy appropriate for much political science research, which relies on quantitative analysis. On the other hand, neither are such intuitions irrelevant to the assessment of democracy.

Reliability is also problematic. A measurement procedure is reliable if it *consistently* yields correct results, which brings us back to validity. Consequently, I focus on validity for the remainder of the discussion and address it through an analysis of ontological objectivity. I propose an account of objectivity that I call *coherence objectivity*. The main idea is that measures are ontologically objective when their use coheres with scientific practice.

I turn to Hasok Chang’s discussion of epistemic iteration to assist in this project (Chang 2004, 2022). Chang’s historical and philosophical account of the standardization of temperature centers around a process that he calls “epistemic iteration”: “In the process of epistemic iteration, we knowingly start inquiry on the basis of an imperfect starting point, and use the outcome of that inquiry in order to improve its own starting point” (Chang 2022, 239).

There are important differences between measuring temperature and measuring democracy. Temperature is a measure of a physical phenomenon whereas democracy is not. Temperature has a basis in physical sensation – heat –and is implicated in a network of physical laws. Democracy names a social/political concept which is neither directly connected to physical sensation nor directly observable. In addition, as is the case for most concepts in social science, it is not embedded in a system of laws. Yet, since they are both measurement projects, they have important similarities.

Cartwright, Bradburn, and Fuller describe measurement as requiring three “steps”: identification of the boundaries of concept to be measured (characterization), identification of a metric to which that concept will be matched (representation), and rules or procedures through which the matching is to be done (procedures) (Cartwright, Bradburn, and Fuller 2017, 78).<sup>12</sup> For temperature, the sensation of heat – the empirical observation that identifies the phenomenon to be measured – is not consistent or reliable. It varies from person to person and differs depending on context. The background concept (heat) needs to be systematized (temperature) and operationalized -- linked to indicators. The metric needs to be of the appropriate sort (in the case of temperature, an interval scale) to make use of the measure in conjunction with physical laws (such as Boyle’s Law). The iterative process through which an appropriate measure is established is both conservative and progressive as Chang sees it. It is conservative in that it

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<sup>12</sup> The account was presented in 2010 at The Workshop on Advancing Social Science Theory: The Importance of Common Metrics and is summarized in *National Research Council* 2011. The ideas are summarized in Cartwright and Runhardt 2014 and developed in Cartwright, Bradburn, and Fuller (2017).

begins from what we know (although we recognize that knowledge to be imperfect) and it is progressive in that among its goal is the improvement of knowledge – that is, to make knowledge more adequate to our aims.

Scientists (researchers) start from some existing body of knowledge using what Chang calls the “principle of respect.” They adopt what is currently accepted as known. However, this respect for background knowledge does not require that they wholeheartedly embrace it or steadfastly hold it to be true. The principle of respect may sometimes be in tension with what Chang calls “the imperative of progress”. We build on what we know in order to improve our knowledge and, in the process, we may revise or even discard what we thought we knew.

I propose that epistemic iteration might be a useful way to understand democracy measurement projects. Chang’s account begins with the sensation of heat – an observable. For measuring democracy, epistemic iteration may begin with some other accepted bit of knowledge – for example, theories of democracy. The starting point is not a foundation, but rather a point from which to begin. It is open to re-evaluation and revision.

V-Dem starts with the five principles that delineate five forms of democracy. In this way, normative theories of democracy constrain measures of democracy by providing a theoretical framework. Theories of democracy are not purely normative however. They are also empirically informed through the study of regime types as they have appeared around the globe over the course of history. Consequently, theories of democracy are shaped by both normative and empirical considerations – iteratively. Which features of regimes should serve as appropriate indicators depends on what political scientists observe as well as what they theorize. Both the connection to theory and the realities of the political world (at any particular moment) serve as (temporarily) fixed points. They are part of the (current) body of knowledge that we affirm

(principle of respect). The reliability (consistency) of the measure with theory provides a means to construct valid measures – measures which cohere with theory, what is observed, and with the aims of research.

Debates within the discipline of political science about the nature of democracy – for instance, the question of whether democracies can be identified solely through objective indicators -- rely on theoretical resources. But they also look at the consequences for knowledge projects, the aims of research, and the policies research informs. While conceptualizing democracy is a starting point for developing measures, concepts may alter in response to changes in regimes around the world, the results of empirical research on the causes and effects of democracy, debates about the values democracies exemplify, the effects on policies of different ways of conceiving of and measuring democracy, as well as the goals of research.

Empirical generalizations produced by political science do not typically take the form of laws as they do in physics. Nonetheless results of research using measures of democracy may produce robust empirical generalizations or middle-range theories. An example is the Democratic Peace hypothesis – the generalization that democracies do not go to war with each other. The way these empirical generalizations, the measures produced through the model, and the overall success of our knowledge when it is put into practice all fit together provides a form of validation of the measures that the research relies on. Adopting a measure of democracy that would result in countries that were deemed democratic going to war with each other would need to be accompanied by a compelling account of why the Democratic Peace generalization was violated. It is the coherence among previously accepted knowledge, the results of research using the measures, and the application of knowledge produced through their use that amount to objectivity – an objectivity that is assessed more holistically than objective indicators of the sort

that Little and Meng use. Put another way, on this account a measure of democracy may be understood as objective when it is subject to theoretical, empirical, and pragmatic constraints. The effect of these constraints can be seen in the way measures function in the practice of the discipline. The measures are objective in so far as they form part of a coherent practice of the relevant science. This is what I refer to as *coherence objectivity*.

## 5. Conclusions

How does coherence objectivity help us think about this debate? As I have framed the discussion, one alternative to reconceptualizing objectivity is to try to capture a thicker conception of democracy through finding better objective indicators. These would be indicators of aspects of democracy such as deliberation, civil liberties, and free expression that are among those V-Dem uses. Such an approach remains focused on agent objectivity and methodological objectivity as a foundation for the adequacy of measures. What is problematic about this focus is the implicit understanding of knowledge as dependent on individuals. Thinking about objectivity of measures in terms of their coherence with scientific practice more clearly acknowledges the social nature of knowledge.

The idea that measures need to be objective in Little and Meng's sense also evokes a questionable foundational approach to measurement. Recall epistemic iteration, which tackles the problem of starting from a fixed point when all aspects of a process are interdependent. A thermometer gives us an interval measure of temperature but to construct and calibrate a thermometer we first must understand the relationship between temperature, pressure, and volume, but these are interdependent. Such dependencies mean that assessing validity –getting

temperature right – requires the coherence of the entire system of practice.<sup>13</sup> Similarly, the connections among various indicators of democracy are not independently known or transparent. We do not have knowledge of the extent to which contested elections that result in turnover depend on freedom of the press, for example. Seeking individual indicators which are taken to be privileged or foundational may obscure such relations.<sup>14</sup>

There is another feature of many social science concepts that is problematic for measurement. Concepts like democracy give rise to what Anna Alexandrova has called “mixed claims” – claims that mix the moral and empirical (Alexandrova 2017, 80). Political science researchers are dominantly from democracies of the West and treat democracy as a good, yet this is rarely explicitly acknowledged in the discussion of measurement. Because coherence objectivity treats objectivity as theoretically, empirically, and *pragmatically* constrained it calls for attention to the various goals of research and the values that shape them. Debates about how to conceptualize democracy are, in part, debates about values. The APSA panel discussion reflected this reality when one of the participants pointed out that Little and Meng’s work had been cited by autocratic rulers as evidence that backsliding had been exaggerated. Because the assessment of objectivity as coherence calls for attention to the goals of research it reminds us that values are indeed involved in such debates. The conception of objectivity as agent objectivity that Little and Meng work with obscures the value valence of democracy and its

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<sup>13</sup> “A system of practice is a network of activities that function coherently together” (Chang 2022, 16).

<sup>14</sup> This is not to claim that there are no essential features of democracy. Contested elections are necessary but not sufficient for democracy.



indicators. Addressing issues of agent objectivity through a focus on methodological objectivity does no better. While awareness of objectivity as coherence does not directly address the role of values in democracy studies, it at least opens the way to doing so by acknowledging values and restructuring the discussion of measures of democracy.

The discussion of coherence objectivity offered here neither vindicates V-Dem's approach nor sheds light on whether there is or is not erosion of democracy. The participants in the discussion addressed a number of other important issues – such as how to conceptualize democracy and whether average measures of democracy globally or examination of specific cases of backsliding tell us more about democratic erosion – but they have not questioned Little and Meng's use of “objective”. I have argued that it would be useful to do so.

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