



# Measuring Mindset Shifts and Evaluating Mindset Shift Efforts

Supplement to *Mindset Shifts: What Are They?  
Why Do They Matter? How Do They Happen?*



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# Introduction

The concept of mindsets is at the heart of social change efforts; it helps us understand how people make meaning of their experiences. Studying mindsets helps explain how individuals arrive at particular beliefs or judgments and why, both individually and collectively, people make the decisions and take the actions they do. Mindset shifts can lead to changes in behavior, policy, and even social institutions and structures. In short, changing mindsets is part of changing society.

Unfortunately, the very feature of mindsets that makes them so powerful in shaping social life—their deep embeddedness in human cognition, experience, and action—makes them challenging to measure and makes mindset shift efforts difficult to evaluate. The taken-for-granted, tacit quality of mindsets poses a methodological challenge for researchers, and the complexity, scale, and length of mindset shift work makes it difficult to disaggregate causes and effects from the broader social contexts in which mindset shift efforts occur.

This brief discussion of measurement and evaluation in mindset shift work, which is intended as a supplement to our report, *Mindset Shifts: What Are They? Why Do They Matter? How Do They Happen?*, offers some guidelines and considerations that we hope will be useful to researchers and others engaged in this work. We do not pretend to have simple or easy solutions to the challenges we raise. As we discuss below, the best approach to measuring mindset shifts and evaluating mindset shift efforts will differ depending on the specific contours of the effort.

# What Needs to Be Measured and Evaluated?

In order to measure the effectiveness and evaluate the success of a mindset shift effort, those engaged in such efforts must measure three types of outcomes:

1. ***Mindset shifts.*** The first, and most obvious, type of outcome to measure is whether mindsets are shifting or have shifted in the desired direction. If, for example, a mindset shift effort is designed to counter health individualism and strengthen ecological mindsets around health, then evaluating the effort requires determining whether individualistic and ecological mindsets are changing (e.g., in relative salience or shape).
2. ***Outcomes related to strategy and tactics.*** The second type of outcome to measure concerns the specific strategy and tactics used in a mindset shift effort. For example, if an effort uses a grassroots strategy that centers on generating productive face-to-face interactions, evaluating the effort requires measuring the number and quality of those interactions. A strategy centered on getting elites to use a new narrative, by contrast, would require measuring use of the narrative by target elites.
3. ***Ultimate social outcomes.*** The third type of outcome to measure is the ultimate outcome in the world that the mindset shift effort is intended to produce. This could be behavior change, policy change, and/or institutional or structural change. An effort centered on strengthening ecological thinking about health, for example, might be primarily intended to create space for changes to policies that affect the social determinants of health (e.g., housing or labor policies). Evaluating this effort would, then, require tracking policy changes at the targeted level (e.g., local or federal policy).

In this supplement, we focus primarily on the first type of outcome—mindset shifts—for two reasons. First, as we discuss, the best means of measuring mindset shifts are relatively consistent across efforts. By contrast, strategies for shifting mindsets may vary widely across efforts and, in turn, the best means of measuring the implementation of strategies will differ greatly in different cases. To return to the example above, the best ways of measuring face-to-face interactions and narrative use by elites will be different. And there are, of course, many other strategies and specific tactics (from shifting stories in

entertainment media to federal lobbying efforts) that can be used, each of which requires its own type of measurement. Second, measuring mindset shifts is both difficult and relatively unexplored. By contrast, the ultimate social outcomes of interest are either easy to track (e.g., policy changes) or there are established ways of measuring them (e.g., behavior change). There is thus not the same need for elaborating measurement strategies for this type of outcome.

There are some general considerations that should be taken into account in measuring outcomes related to strategy and in developing an evaluation strategy that looks across outcome types, and we discuss these at the conclusion of this supplement. But we turn now to our primary focus—measuring mindset shifts.

# How to Measure Mindsets and Mindset Shifts

There are three dimensions of mindsets that researchers must attend to, which derive from the three types of enduring mindset shifts discussed in the larger report.<sup>1</sup> These dimensions are:

1. *Availability*. Is the mindset available to individuals as a way of making sense of the world?
2. *Salience*. How frequently do individuals rely on the mindset, and how heavily do they rely on the mindset in arriving at conclusions?
3. *Boundaries*. How are the core assumptions of the mindset linked to other beliefs or assumptions about the world?

In discussing methods, we highlight how each method gets at these different dimensions.

Before discussing particular methods, it's important to highlight a fundamental challenge in measuring mindsets: due to the tacit, taken-for-granted nature of mindsets,<sup>2</sup> researchers cannot explicitly ask about mindsets without altering what they are measuring. If researchers explicitly ask about the ideas embedded within a mindset, in doing so they bring that mindset to mind. This makes it impossible to detect whether the mindset was otherwise or previously available to the research participant, and how salient the mindset is in the absence of priming. Similarly, if researchers pose questions that explicitly ask participants to reflect on the boundaries of the mindset, this act of reflection may itself affect those boundaries. How, then, do you measure these implicit ways of thinking without distorting them in the process?

Qualitative methods that rely on open-ended questions are, generally speaking, best suited for examining mindsets, as they can elicit talk that draws upon mindsets without explicitly asking about them. This poses another challenge for researchers, however, as quantitative methods are better suited to provide precision in measurement, clear comparability over time, and generalizability across a population.

For these reasons, we believe a mixed-method approach that combines the strengths of qualitative and quantitative methods is necessary to accurately and precisely measure mindsets and mindset shifts. Below, we discuss the strengths and limitations of several different methods and conclude with a discussion about how these methods can best be used together.

## Cognitive Interviews

Semi-structured cognitive interviews are the best method for understanding mindsets deeply and accurately exploring their availability, salience, and boundaries. Such interviews rely on open-ended questions to elicit talk about an issue. This gets around the danger highlighted above—by eliciting talk in which people *use* mindsets without explicitly asking *about* mindsets, researchers can avoid influencing what they are trying to measure. Analysis identifies mindsets in several steps: first, researchers identify patterns in talk; next, they develop a set of hypotheses about mindsets that might explain such patterns; they then return to the data to test these hypotheses and refine understandings of mindsets based on what they find.<sup>3</sup>

If a mindset is not apparent across a set of interviews, researchers can reliably infer that the mindset is not available to the population with whom research has been conducted. Similarly, researchers can ascertain salience by examining the relative frequency with which the mindset appears in participants' talk. In addition, in cases where there are competing mindsets used to think about an issue, salience can be determined by exploring how participants toggle between mindsets. If participants consistently rely on a particular mindset first, before another mindset comes to mind, this suggests the first mindset is more salient for them. If they consistently rely on a mindset in coming to final conclusions on an issue, this likewise suggests higher salience. Researchers can explore the boundaries of mindsets by examining patterns of reasoning—the tendency to apply a mindset to a particular issue or experience, or to relate it to a particular idea, for example. To return to the example used in the report, people's application of the *love and commitment* model of marriage—the dominant existing mindset about marriage—to talk about same-sex couples is evidence that the boundaries of the traditional mindset have expanded.

Cognitive cultural analysis can and should be systematic. As Naomi Quinn wrote, “systematicity does not always mean large samples or quantitative findings. Indeed, the cultural analysis of discourse often mitigates against both, since it is so time-consuming to collect, transcribe, and analyze large samples of the rich discourse required, and since techniques of quantification may, for all their advantages, also have the disadvantage that they wring meaning, including cultural meaning, out of these data.”<sup>4</sup> The findings of good cognitive cultural analysis are not mere impressions, but rather the result of proper systematic analysis. Yet small sample size and lack of quantification are, to be sure, limitations of this method. Small sample sizes make it difficult to collect enough data to

compare mindsets between subgroups within society, and the lack of quantitative results makes comparability between groups or times imprecise.<sup>5</sup>

## Surveys

The strengths and limitations of surveys are the inverse of those of cognitive interviews. Surveys make it possible to collect data on a large scale with a representative sample and closed-ended questions generate quantitative data. Together, these enable precise comparisons between groups or times. To the extent that surveys can accurately measure mindsets, they make it possible to precisely track mindset shifts.

Yet closed-ended survey questions cannot directly examine mindsets without making the mindset explicit in the process. As we discussed above, this distorts what is being measured by bringing to mind the mindset or a particular feature or application of it.

There is no perfect way to resolve this problem, but there are at least three strategies that can be used in survey questions that can, when coupled with qualitative methods, provide a picture of mindsets and a way of measuring mindset shifts.

1. *Degree of agreement.* The simplest strategy for measuring mindsets is to articulate the core assumptions of a mindset and measure the degree of agreement or disagreement with the mindset.<sup>6</sup> Researchers can infer from low levels of agreement that a mindset is either not otherwise available or that it has low salience for an individual.
2. *Forced choice/competing poles.* When there are two competing mindsets that apply to a topic (e.g., individualist and ecological mindsets about social determinants), questions can be designed to force survey participants to choose between the mindsets or to place themselves on a spectrum between poles representing the competing mindsets. Such questions cannot be used to measure availability or boundaries of a mindset, but they do offer a measure of salience. Measurement here does affect thinking—both mindsets are activated by the survey question—but we can reasonably infer that preference for one mindset over another indicates a likelihood to rely on the mindset more consistently and heavily in thinking.
3. *Indirect questions.* Researchers can develop survey questions that measure mindsets indirectly by examining opinions that follow from the application of the mindset.<sup>7</sup> For example, researchers could measure health individualism (the idea that health is primarily shaped by individual lifestyle choices) by asking a series of questions about the importance of different causal factors in shaping health. This includes both individual lifestyle choices (e.g., diet or exercise) and other factors (e.g., genetics and environment). Different question formats can be used, such as agree/disagree questions, rank-order questions designed to measure the relative weight given to different factors, or individual items that separately measure attributions of importance for different



factors. If respondents attribute greater importance or priority to individual factors, this can be seen as an indication of reliance on health individualism.

Indirect questions can potentially be designed to explore all three dimensions of mindsets—availability, salience, and boundaries. The health individualism example shows how researchers might make inferences about availability and salience. As with degree of agreement questions, low attribution of importance or priority can be seen as an indication of lack of availability or low salience. In theory, well-designed indirect questions could also be used to explore a specific, grounded hypothesis about the boundaries of a model. To return to the marriage example, a survey could couple questions designed to explore the salience of the love and commitment model of marriage with questions gauging support for same-sex marriage. By examining the relationship between salience of the mindset and support for same-sex marriage and tracking shifts in this relationship over time, researchers could infer shifts in the boundaries of the model.

## **Analysis of Social Media Content**

Social media provides another possible source of information about mindsets, as this is another source of talk about topics.<sup>8</sup> This source has two benefits:

1. Social media content is organic and not a response to researcher prompts, so it does not run afoul of the distortion problem flagged above.
2. It is a source of large quantities of data, addressing sample size challenges and permitting both qualitative and quantitative analysis.

Despite these potential benefits, there are a couple of considerations that make us wary of social media content as a key source for measurement of mindsets and mindset shifts:

1. Social media contributions tend to be short, making reliable identification of the mindsets that users are employing extremely difficult.
2. Content is not representative, and high frequency users of social media are likely to be different in important ways from other parts of target populations. This means these data can't be used to arrive at generalizable conclusions about broader populations.

In the right circumstances, targeted exploration of social media content could potentially be a way of tracking a shift in mindsets, but in general, we think a combination of surveys and cognitive interviews is more likely to generate an accurate and precise picture of mindsets and mindset shifts.

## Focus Groups

Focus groups are another qualitative method that can provide useful information about mindsets. Focus groups admit similar questions to cognitive interviewing and analysis of such sessions can yield a similar understanding of mindsets. Focus groups have a couple of strengths compared to interviews, but one significant limitation.

The main strength of focus groups is that they make it possible to explore how social dynamics shape use of mindsets—for example, does group composition affect which mindsets surface in talk and how they are applied? In addition, focus groups make it possible to collect data from a larger group of participants more quickly and efficiently than interviews, expanding sample size with less effort. This is a substantial benefit in tracking mindsets over time.

The main limitation of focus groups is that the social dynamics complicate analysis. It is difficult to determine how salient particular mindsets would be in a different social setting or in individuals' own thinking outside of group conversation. It is similarly difficult to ascertain with confidence whether a mindset introduced by one participant would be available to *all* participants if it hadn't been introduced to them.

## Overall Approach

The best approach for measuring mindsets and mindset shifts depends on the specific mindsets of interest and the particular goals of a project, as well as the availability of resources for measurement. Generally speaking, we think a mixed-method approach is best, ideally consisting of a mix of cognitive interviews and regular tracking surveys. Given that cognitive interviews are time intensive, focus groups are a good alternative for tracking—a qualitative method that can be conducted and analyzed relatively quickly to gauge progress.

# Measuring Outcomes Related to Strategy and Tactics

As we discussed above, the best ways of measuring outcomes related to the strategy and tactics used by mindset shift efforts depends on which strategy and tactics are used. Thinking through all possible permutations of strategies and tactics and corresponding measures is beyond the scope of this supplement. There are, however, a couple of general considerations that should guide measurement of the implementation of mindset shift strategies and tactics:

1. *Reach*. As we discuss in the larger report, to be effective, mindset shift efforts must work at a large scale.<sup>9</sup> Researchers should explore *who is being reached* by efforts—whether by communications, face-to-face interactions, behavioral interventions, policy changes (i.e., whose life is affected by a policy that might provoke a mindset shift?), or other levers of change. If only a small segment of the targeted population is being reached, that’s a sign that the effort is unlikely to succeed.
2. *Dose and intensity*. As we discuss in the report, mindset shifts typically require sustained, repeated, or deeply affecting experiences, whether through face-to-face interactions, repeated engagement with a frame or narrative through multiple communications, or having one’s experiences change in fundamental ways as the result of a new policy.<sup>10</sup> Measurement should attend to *how frequently or profoundly people’s experiences are affected* by the mindset shift effort. If the dose or intensity of engagement is low, efforts are generally less likely to succeed.

When it comes to ultimate social outcomes at stake in a mindset shift effort (e.g., behavior change or policy change), there are large literatures about established practices for measuring and tracking outcomes, as we noted above. We thus leave aside the issue of how to measure these outcomes.

# Evaluating Mindset Shift Efforts

Even if the three types of outcomes discussed in this report are properly *measured*, this does not suffice for a full *evaluation* of mindset shift efforts. Even if a strategy has been implemented as intended, with wide reach and high dose or intensity, the targeted mindset has shifted in the desired way, and the ultimate social goal has been achieved, this does not necessarily mean that the strategy caused the mindset shift or that the mindset shift contributed to the social goal. To *fully* evaluate mindset shift efforts' success, we would need to answer two questions:

1. Did the mindset shift strategy actually lead—or at least contribute to—the mindset shift?
2. Did the mindset shift contribute to the ultimate social outcome?

Because mindset shift efforts take place amidst the messy complexity of social life and happen over a long period of time, it's incredibly difficult to clearly identify the causes of these outcomes and to answer these two questions in any given case. There are myriad other factors at play beyond deliberate strategy that can contribute to or undermine mindset shifts, and there are, similarly, many factors that affect major social outcomes like policy or behavior change other than cultural mindsets.

Faced with these challenges, evaluators have two options. The first option is simply to measure the three types of factors—already a challenging endeavor—and forego a comprehensive evaluation that attempts to answer the two questions above. If outcomes shifted in the desired direction, and there was a well-articulated theory of change behind the effort, then it's reasonable to infer that the effort played a meaningful role in bringing about the outcomes. The second option is to try to establish causal links by collecting additional information. The relevant information will, of course, depend on the specifics of the strategy and the ultimate social goal. For example, if the mindset shift effort centered on communications and was directed toward policy changes, researchers would need to collect additional information at each step. They would need to establish that exposure to communications shaped by the mindset shift effort—for example, a new narrative disseminated through entertainment media and a social media campaign—actually shifted the thinking of the audiences reached in a durable way. Even more challenging, they would need to collect information to show that shifted mindsets influenced policymaking,

perhaps by interviewing policymakers about how their own thinking shifted over time or about how they were influenced by shifts in public discourse and changes in public opinion.

Given the obvious challenges of this latter approach, we believe the first approach is generally preferable. The choice between them necessarily depends, though, on the details of the specific effort and the particular challenges and opportunities for measurement and evaluation that different efforts present.

As a final note, it's worth highlighting that measuring these three outcomes also provides what is needed to evaluate progress and adapt over the course of a mindset shift effort, as we discuss in the larger report.<sup>11</sup> If measurement shows that a strategy is being implemented as intended for a sustained period but is not leading to any indication of a mindset shift, this suggests the need to adapt strategy or tactics. Similarly, if a mindset is shifting but there's no sign of progress on the ultimate social outcome, this suggests the need to think through what additional actions are required to take advantage of this shift in how people are thinking about the world. Measurement and evaluation are, thus, not only important in retrospect to generate lessons learned for future efforts but are also a key ingredient in the success of in-progress mindset shift work.

# Endnotes

1. See *Mindset Shifts: What Are They? Why Do They Matter? How Do They Happen?*, pp. 17–18.
2. For a definition of mindsets, see *Mindset Shifts: What Are They? Why Do They Matter? How Do They Happen?*, p. 12.
3. Quinn, N. (Ed.). (2005). *Finding culture in talk: A collection of methods*. New York, NY: Palgrave Macmillan.
4. Quinn, N. (Ed.). (2005). Introduction. In *Finding culture in talk: A collection of methods* (pp. 1–34). New York, NY: Palgrave Macmillan.
5. We should note that we are currently exploring the use of corpus linguistics analysis with large databases of interviews as a possible way to address this limitation. A corpus-based approach uses corpus data as a “source of examples, to check researcher intuition or to examine the frequency and/or plausibility of the language contained within a smaller data set” (Baker, P. [2006]. *Using corpora in discourse analysis* [p. 16]. London: Continuum). Corpus analysis compares large sets of data, examining words and semantic concepts. We are exploring the use of WMatrix, an online tool for corpus analysis and corpus comparison that produces concordance tables, frequency lists, collocation tables, and keyness analyses, and automatically tags data for syntax and semantic concepts (Rayson, P. [2009]. *Wmatrix: a web-based corpus processing environment*. Computing Department, Lancaster University. <http://ucrel.lancs.ac.uk/wmatrix/>). If this method can be used to reliably identify mindsets in interview transcripts, this will make it possible to quantitatively compare relative salience of a mindset between different groups or between samples collected at different times. This method offers a possible way of leveraging and repurposing existing interview data, but it requires a large number of interviews, making it practically untenable in most cases where new data collection is required.
6. Measures of growth and fixed mindsets are typically in this format. For a discussion of problems with these measures, see Maul, A. (2017).

Rethinking traditional methods of survey validation. *Measurement: Interdisciplinary research and perspectives*, 15(2), 51–69.

<https://doi.org/10.1080/15366367.2017.1369786>

7. Established measures for widely studied mindsets tend to fall into this category, such as measures of individualism and collectivism. See, for example, Triandis, H. C. & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology*, 74(1), 118–128. I believe the ARCHES project is exploring individualistic and ecological thinking through indirect survey questions.
8. For an overview of social media content analysis, see Skalski, P. D., Neuendorf, K. A., & Cajigas, J. A. (2017). Content analysis in the interactive media age. In Harris, A (Ed.), *The content analysis guidebook* (2nd ed., pp. 201–242). Los Angeles: SAGE Publications, Inc.
9. See esp. Lesson #3 in *Mindset Shifts: What Are They? Why Do They Matter? How Do They Happen?*, pp. 37–38.
10. See *Mindset Shifts: What Are They? Why Do They Matter? How Do They Happen?*, p. 38.
11. See *Mindset Shifts: What Are They? Why Do They Matter? How Do They Happen?*, p. 48.

## About FrameWorks

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