What Makes a Concept Good?
A Criterial Framework for Understanding
Concept Formation in the Social Sciences*

John Gerring
Boston University

Nowhere in the broad and heterogeneous work on concept formation has the question of conceptual utility been satisfactorily addressed. Goodness in concept formation, I argue, cannot be reduced to 'clarity,' to empirical or theoretical relevance, to a set of rules, or to the methodology particular to a given study. Rather, I argue that conceptual adequacy should be perceived as an attempt to respond to a standard set of criteria, whose demands are felt in the formation and use of all social science concepts: (1) familiarity, (2) resonance, (3) parsimony, (4) coherence, (5) differentiation, (6) depth, (7) theoretical utility, and (8) field utility. The significance of this study is to be found not simply in answering this important question, but also in providing a complete and reasonably concise framework for explaining the process of concept formation within the social sciences. Rather than conceiving of concept formation as a method (with a fixed set of rules and a definite outcome), I view it as a highly variable process involving trade-offs among these eight demands.

John Gerring is assistant professor in the Department of Political Science at Boston University, 232 Bay State Road, Boston, MA 02215.

> As we are . . . prisoners of the words we pick, we had better pick them well.
> — Giovanni Sartori[1]

"Concept formation" conventionally refers to three aspects of a concept: (a) the events or phenomena to be defined (the extension, denotation, or definien-

dum), (b) the properties or attributes that define them (the intension, connotation, definiens, or definition), and (c) a label covering both *a* and *b* (the term). Concept formation is thus a triangular operation; good concepts attain a proper alignment between *a*, *b*, and *c*.[2]

If this notion seems unfamiliar to readers it is doubtless because so little attention has been devoted to the subject of concept formation within the social sciences. To be sure, concepts are a central concern for philosophers, political theorists, sociological theorists, intellectual historians, linguists, and cognitive psychologists.[3] However, these scholars are primarily interested in concepts as they function in ordinary or philosophical contexts, not in the specialized realm of social science. I take as my point of departure the assump-

2. The tripartite analysis of concept formation is derived from C. K. Ogden and I. A. Richards, *The Meaning of Meaning* [1923] (San Diego: Harcourt Brace, 1989) and, more directly, from Sartori, "Guidelines. . . ," 22.

3. On the phenomenon of contested concepts, see Barry Clarke, "Eccentrically Contested Concepts," *British Journal of Political Science* 9 (January 1979), 122-28; William E. Connolly, *The Terms of Political Discourse, 2d ed.* (Princeton: Princeton University Press, 1983); W. B. Gallie, "Essentially Contested Concepts," [1956], reprinted in *The Importance of Language,* ed. Max Black (Englewood Cliffs, NJ: Prentice-Hall, 1962), 121-46; John N. Gray, "On the Contestability of Social and Political Concepts," *Political Theory* 5 (August 1977), 331-48. On conceptual change through history, see Terence Ball, *Transforming Political Discourse: Political Theory and Critical Conceptual History* (Oxford: Basil Blackwell, 1988); *Political Innovation and Conceptual Change,* ed. Terence Ball, James Farr and Russell L. Hanson (Cambridge: Cambridge University Press, 1989); Reinhart Kosselleck, "Linguistic Change and the History of Events," *Journal of Modern History* 61 (December 1989), 649-66. On the differences between researchers' and subjects' definitions of key concepts, see Steven R. Brown and Richard W. Taylor, "Perspective in Concept Formation," *Social Science Quarterly* 52 (1972), 852-60. On epistemological issues pertaining to concept formation, see J. L. Austin, *Philosophical Papers* (Oxford: Clarendon Press, 1961); Virginia Held, "The Terms of Political Discourse: A Comment on Oppenheim," *Political Theory* 1 (February 1973), 69-75; Arthur L. Kalleberg, "Concept Formation in Normative and Empirical Studies: Toward Reconciliation in Political Theory," *American Political Science Review* 63:1 (March 1969), 26-39; *Philosophy of the Social Sciences: A Reader,* ed. Maurice Natanson (New York: Random House, 1963); Anthony Palmer, *Concept and Object: The Unity of the Proposition in Logic and Psychology* (London: Routledge, 1988); Hanna Fenichel Pitkin, *Wittgenstein and Justice: On the Significance of Ludwig Wittgenstein for Social and Political Thought* (Berkeley: University of California Press, 1972). On the influence of cognitive and linguistic behavior on concept formation, see Riley W. Gardner and Robert A. Schoen, "Differentiation and Abstraction in Concept Formation," *Psychological Monographs: General and Applied* 76 (1962), 1-21; George Lakoff, *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind* (Chicago: University of Chicago Press, 1987); *Knowledge, Concepts, and Categories,* ed. Koen Lamberts and David Shanks (Cambridge: MIT Press, 1997); Eleanor Rosch, Carolyn Mervis, Wayne Gray, David Johnson, and Penny Boyes-Braem, "Basic Objects in Natural Categories," *Cognitive Psychology* 8 (1976), 382-439; John Taylor, *Linguistic Categorization, 2d. ed.* (Oxford: Clarendon Press, 1995). On the definition of 'concept,' see Robert Adcock, "What is a 'Concept,'" presented at the annual meetings of the American Political Science Association, Boston, MA (September 1998).

tion that concepts function differently in political science, sociology, anthropology, history, and psychology than they do in other language regions. To the extent that this is true, we may justify the restricted ambit of the present paper.

In any case, concepts are critical to the functioning and evolution of social science. Weber notes that the progress of the cultural sciences occurs through conflicts over terms and definitions.

> Its result is the perpetual reconstruction of those concepts through which we seek to comprehend reality. The history of the social sciences is and remains a continuous process passing from the attempt to order reality analytically through the construction of concepts—the dissolution of the analytical constructs so constructed through the expansion and shift of the scientific horizon—and the reformulation anew of concepts on the foundations thus transformed. . . . The greatest advances in the sphere of the social sciences are substantively tied up with the shift in practical cultural problems and take the guise of a critique of concept-construction.[4]

All authors make lexical and semantic choices as they write and thus participate, wittingly or unwittingly, in an ongoing interpretive battle. This is so because language is the toolkit with which we conduct our work, as well as the substance *upon which* we work. Indeed, concept formation lies at the heart of all social science endeavor. It is impossible to conduct work without using concepts. It is impossible even to conceptualize a topic, as the term suggests, without putting a label on it. Any significant work on a subject will involve a *re*conceptualization of that subject. Any work on the nation-state, for example —if at all persuasive—alters our understanding *of* the nation-state. No use of language is semantically neutral.

The importance of concept formation to the conduct of social science may be glimpsed by the familiar observation that one's results are heavily colored by one's definition of key terms. If I say "Somoza was a fascist," the hearer is apt to respond, "Define 'fascist.'" It is commonly said that one can prove practically anything simply by defining terms in a convenient way. This is no doubt what prompts certain commentators to say that we ought to pay less attention to the terms we use, and more to the things out there (in the world)

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4. Max Weber, *The Methodology of the Social Sciences* (New York: Free Press, 1949), 105-06. Weber's remarks on social science are usefully contrasted with Wittgenstein's comments on the practice of philosophy. "Philosophy may in no way interfere with the actual use of language; it can in the end only describe it . . . it leaves everything as it is" (*Logical Investigations* 41: para 124); quoted in Gordon Graham, *Historical Explanation Reconsidered* (Aberdeen: Aberdeen University Press, 1983), 2. Some approaches to ordinarily language philosophy approach this neutral ideal. Most, however, do not even pretend to.

that we are talking about.[5] Yet, it will become clear in the course of this discussion that we *cannot* dispense with high-order concepts like fascism, ideology, democracy, justice, and so forth. If we conducted social science business only with directly-observable or countable concepts (deaths, votes, and the like) we would have very little of importance to say, and we would have no way of putting these small-order concepts together into a coherent whole. Knowledge would no longer cumulate. Indeed, social science would be stopped in its tracks. If we cannot, then, get language out of the way, we had best learn to deal more effectively with words. We had best learn, in other words, what differentiates a good concept from one that is less good, or less useful.

This brings us to a consideration of what, precisely, is the matter with the way we use language (and in particular, key concepts) in social science. For many years it has been a standard complaint that the terminology of social science lacks the clarity and constancy of the natural science lexicon. 'Ideology,' for example—a concept we shall employ repeatedly in the following discussion—has been found to contain at least thirty-five possible attributes, forming a conceptual apparatus with 2^{35} definitional possibilities.[6] Other concepts, like justice, democracy, the state, and power, are similarly (though perhaps not so extremely) fraught. Truly, it might be said, we do not know what it is we are talking about when we use these terms: for when A says 'ideology' she may mean something quite different than B. Concepts are employed differently in different fields and sub-fields, and within different intellectual traditions (e.g., marxist, weberian, behavioral, rational choice).

But the confusion does not end there, for even *within* single subfields or intellectual traditions there is a good deal of ambiguity surrounding such terms. Concepts are routinely stretched to cover instances that lie quite a bit outside their normal range of use.[7] Or they are scrunched to cover only a few instances (ignoring others). Older concepts are redeployed, leaving etymo-

5. Popper, for example, writes "Never let yourself be goaded into taking seriously problems about words and their meanings. What must be taken seriously are questions of fact, and assertions about facts, theories and hypotheses; the problems they solve; and the problems they raise." Karl Popper, *Unended Quest: An Intellectual Autobiography* (LaSalle, IL: Open Court, 1976), 19; quoted in David Collier, "Putting Concepts to Work: Toward a Framework for Analyzing Conceptual Innovation in Comparative Research," presented at the annual meetings of the American Political Science Association, Boston, MA (September 1998).

6. See John Gerring, "Ideology: A Definitional Analysis," *Political Research Quarterly* 50 (December 1997): 957-94.

7. On conceptual stretching, see David Collier and James E. Mahon, Jr., "Conceptual 'Stretching' Revisited: Adapting Categories in Comparative Analysis," *American Political Science Review* 87 (December 1993), 845-55; Giovanni Sartori, "Concept Misformation in Comparative Politics," *American Political Science Review* 64:4 (December 1970), 1033-46; Sartori, "Guidelines."

logical trails that confuse the unwitting reader. New words are created to refer to things that were perhaps poorly articulated through existing concepts, leaving a highly complex lexical terrain (for the old concepts continue to circulate). Words with similar meanings crowd around each other, vying for attention and stealing each others' attributes (e.g., ideology, political culture, belief-system, value-system). Thus we play "musical chairs with words," in Sartori's memorable phrase.[8]

This sort of semantic confusion throws a wrench into the work of social science. Arguments employing such terms have a tendency to fly past each other; work on these subjects does not cumulate. Concepts seem to "get in the way" of a clear understanding of things. Our conceptual apparatus seems defective.

Approaches to the Problem

A variety of approaches (some more self-conscious than others) may be discerned on the vexed question of concept formation. Let us begin with the familiar admonition to carefully define our terms and to maintain a reasonable level of consistency in our use of those terms within a given work. This is certainly sound advice, and a good point of departure for this discussion.

The real problem arises when one considers the antecedent question: which terms, and which definitions for those terms, should we choose? Purely stipulative definitions (deriving solely from the authority of the author) can be difficult to comprehend and—equally important—to remember. We are likely to object to such definitions as arbitrary if they do not fit with our intuitive understandings of the term or the subject matter. For these reasons, such definitions are less likely to permanently reshape scholarly understandings, or even to make sense. If, as Galileo said, all definitions are arbitrary, then it must be observed that some definitions are a great deal more arbitrary than others.[9] Humpty Dumpty's rules of concept formation will not do very well for social science. It matters, in other words, how we define our terms, not merely that we define them.

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8. Giovanni Sartori, "The Tower of Babble," in *Tower of Babel: On the Definition and Analysis of Concepts in the Social Sciences,* ed. Giovanni Sartori, Fred W. Riggs, and Henry Teune (International Studies, occasional paper no. 6), 9. See also Sartori, "Guidelines," 38, 52-53.

9. Galileo is paraphrased in Richard Robinson, *Definition* (Oxford: Clarendon Press, 1954), 63. Robinson discusses the problems caused for Locke by his arbitrary redefinition of 'idea.' "In common use in Locke's century the word 'idea' meant, as it does in ours, something essentially part of the thinker or perceiver and not of the objects he surveys. To redefine it, therefore, as any object of thinking was either to make a most violent departure from usage or to imply that no man can ever think about anything that is not a part of himself. The latter is what happened to Locke, without his intending it" (74).

Perhaps the oldest solution to the age-old problem of concept formation is to rely upon norms of established usage (as defined by dictionary lexicons or more extended etymological study). This, broadly speaking, is the ordinary-language approach to concept definition.[10] Yet, as philosophers and linguists are quick to point out, norms of ordinary usage generally provide a *range* of terminological and definitional options, rather than a single definition; most concepts, perhaps *all* key social science concepts, are multivalent. Semantic complications multiply when a concept's meaning is considered historically, in different languages, in different language regions of the same language, in different grammatical forms (e.g., as noun, adjective, or verb), and in different speech acts. Occasionally, we find ourselves constructing concepts that are, for most intents and purposes, new. Thus, although ordinary usage may be an appropriate place to begin, it is not usually an appropriate place to end the task of concept formation. Given the diversity of meanings implied by ordinary usage there is rarely a *single* definition one might appeal to in settling semantic disputes.

Nor is there any good reason to suppose that social science should restrict itself to ordinary meanings when defining terms for social-scientific use. Social science concepts, as Durkheim pointed out, "do not always, or even generally, tally with that of the layman."

> It is not our aim simply to discover a method for identifying with sufficient accuracy the facts to which the words of ordinary language refer and the ideas they convey. We need, rather, to formulate entirely new concepts, appropriate to the requirements of science and expressed in an appropriate terminology.[11]

Social scientists, like all sub-communities—e.g., like doctors, lawyers, football players—require a somewhat specialized vocabulary. This does not mean, of course, that a premium should be placed on "scientific," as opposed to ordinary, usage. Indeed, I shall argue that all departures from natural language impose costs, and should not be adopted lightly. However, it seems virtually

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10. For work in the ordinary-language tradition (I employ the term loosely), see John L. Austin, *Philosophical Papers*; *Philosophy and Ordinary Language*, ed. Charles E. Caton (Urbana: University of Illinois Press, 1963); *Ordinary Language*, ed. V.C. Chappell (Englewood Cliffs: Prentice-Hall, 1964); Pitkin, *Wittgenstein*; Gilbert Ryle, *The Concept of Mind* (New York: Barnes & Noble, 1949); Paul Ziff, *Semantic Analysis* (Ithaca: Cornell University Press, 1960). See also work by G.E.M. Anscombe, Stanley Cavell, Jerry Fodor, Jerrold Katz, Norman Malcolm, and John Wisdom—all loosely inspired by Wittgenstein's later work.

11. Emile Durkheim, *The Rules of Sociological Method* [1895] (New York: The Free Press, 1964), 36-7.

indisputable that such departures must, and should, be taken on some occasions.[12] Social science cannot accept words simply as they present themselves in ordinary speech, or a natural-language dictionary. Some fiddling with words and definitions is incumbent upon the researcher.

A second tradition in concept formation equates successful definition with the identification of attributes that provide necessary and sufficient conditions for locating examples of the term (i.e., the phenomenon itself). "In defining a name," writes Mill, "it is not usual to specify its entire connotation, but so much only as is sufficient to mark out the objects usually denoted by it from all other known objects. And sometimes a merely accidental property, not involved in the meaning of the name, answers this purpose equally well."[13] Following this general tack, a later logician writes: "A class must be defined by the invariable presence of certain common properties. If we include an individual in which one of these properties does not appear, we either fall into a logical contradiction, or else we form a new class with a new definition. Even a single exception constitutes a new class by itself."[14] To define human as an animal that is (a) featherless and (b) bipedal, for example, is to offer a definition that successfully picks out one species from other species. This approach privileges one desideratum (which I call 'differentiation') over all others. Like the approach of ordinary language, this approach is not so much wrong as insufficient. Humans are indeed featherless and bipedal, but this is not what we usually *mean* when we use the word 'human.' (Consider the qualities that we consider distinctively 'human'; featherlessness and bipedality would probably rank low on such lists.) Although definitions in social science are called upon to perform a referential function, their purpose is not *merely* referential (see below).

Moreover, even if we *were* to privilege differentiation over all other conceptual desiderata, achieving the goal of the 'classical' concept (whose attrib-

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12. Richardson, *Definition* (73) and Sartori, "Guidelines," offer further reflections on this point.

13. John Stuart Mill, *System of Logic* [1843] 8th ed. (London: Longmans, Green, 1872), 73.

14. W. Stanley Jevons, *The Principles of Science* (London: 1892), 723; quoted in Abraham Kaplan, *The Conduct of Inquiry: Methodology for Behavioral Science* (San Francisco: Chandler Publishing, 1964), 68. See also Paul F. Lazarsfeld, "Concept Formation and Measurement in the Behavioral Sciences: Some Historical Observations," in *Concepts, Theory, and Explanation in the Behavioral Sciences*, ed. Gordon J. DiRenzo (New York: Random House, 1966), 144-204; Felix E. Oppenheim, *Political Concepts: A Reconstruction* (Chicago: University of Chicago, 1981). Although Sartori's work is too wide-ranging to fit into any single model, his repeated injunction to "seize the object" ("Guidelines," 26), to "identify the referent and establish its boundaries" (33) puts him closer to the classical camp than to any other. "The defining properties are those that bound the concept extensionally. . . . Confine your defining to the necessary properties," writes Sartori (55). For further discussion of the classical concept, see Adcock, "What is a 'Concept,'" and Taylor, *Linguistic Categorization*.

utes always identify its referents, and no others) might not be possible in many instances. Consider the concept 'mother.' If defined as the person who gives birth to a child we would appear to satisfy the always-and-only criterion. But how are we to refer to foster mothers and adoptive mothers, or surrogate mothers (who do not provide genetic material for the child)? Are these not also, in some basic sense, 'mothers'? Even the "featherless and biped" definition breaks down in the face of accident victims and birth defects. Problems multiply when one begins to consider *social science* concepts. Which attributes of 'democracy,' for example, should be considered necessary and sufficient to identify instances of democracy—contestation, participation, accountability, protection of basic rights, or some combination thereof? The classical notion of a concept is an ideal rarely satisfied in social science, as many writers have pointed out.[15]

A third tradition argues that concept formation is rightfully subservient to theory formation. Concepts are the hand-maidens of theories, and consequently may be judged only so good as the theories they serve.[16] Indeed, concepts *are* the building-blocks of all inferences, and the formation of many concepts is clearly, and legitimately, theory-driven. "Theory formation and concept formation go hand in hand," Hempel stresses; "neither can be carried on successfully in isolation from the other."[17]

My only dissent from this line of reasoning—and it is one with which most scholars would probably concur—is to point out that concept formation is not *merely* a matter of theory formation. This will become abundantly clear as we progress. For the moment one might consider the fact that a concept's utility in facilitating theory-formation is influenced by the degree to which it can be differentiated from neighboring concepts. If, let us say, 'ideology' is defined in such a way as to encroach upon what we normally think of as political culture, then the theory within which this concept takes its place is seriously impaired. A rose by another name—say, 'political culture'—may smell

15. See Collier and Mahon, "Conceptual 'Stretching'"; Kaplan, *Logic of Inquiry* (68); Lakoff, *Women, Fire*.

16. See, e.g., Russell Faeges, "Theory-Driven Concept Definition and Classificatory Perversity," unpublished manuscript, n.d.; Carl G. Hempel, *Aspects of Scientific Explanation: And Other Essays in the Philosophy of Science* (New York: The Free Press, 1965), 139. A slightly different version of the theoretical approach is offered by Murray G. Murphey, *Philosophical Foundations of Historical Knowledge* (Albany: SUNY Press, 1994). Rather than seeing concepts performing functions within theories, Murphey proposes that "theories that explain the behavior and properties of instances of the concept *are* the meanings of concepts" (23-24; emphasis added). Thus, the best definition of gold is "the element whose atomic number is 79."

17. Hempel, *Aspects*, 113 (see also 139). Kaplan calls this the paradox of conceptualization: "The proper concepts are needed to formulate a good theory, but we need a good theory to arrive at the proper concepts" (*Logic of Inquiry*, 53).

more sweet. A great theory, with poorly crafted concepts is at best a great idea, poorly implemented. Concept formation and theory formation are intimately conjoined; the former is not reducible to the latter.

Other work on the subject of concept formation is more difficult to summarize (mainly because the field of concept formation is so poorly defined). A fourth approach suggests that concept formation is particular to the concept-type—e.g., circular, classical, classificatory, comparative, connotative, contextual, core, deductive, denotative, disposition, empirical, essential, essentially-contested, experiential, family-resemblance, functional, *genus et differentia*, ideal-type, inductive, lexical, metrical, minimal, nominal, object, observable, operational, ostensive, persuasive, polar, precising, property, radial, real, residual, stipulative, technical, theoretical, and so forth.[18] According to this line of reasoning, different concept-types impose different definitional demands on the conceptualizer. Each is appropriate for different (largely context-driven) tasks.

Finally, as I have suggested, a good deal of work on concept formation in the social sciences (including some of the work just cited) does not fall neatly

18. See, e.g., Kazimierz Adjdukiewicz, "Three Concepts of Definition," in *Problems in the Philosophy of Language*, ed. Thomas M. Olshewsky (New York: Holt, Rinehart and Winston, 1969); Peter A. Angeles, *Dictionary of Philosophy* (New York: Barnes and Noble, 1981), 56-58; Robert Bierstedt, "Nominal and Real Definitions in Sociological Theory," in *Symposium on Sociological Theory*, ed. Llewellyn Gross (Evanston, IL: Row, Peterson, 1959); Thomas Burger, *Max Weber's Theory of Concept Formation: History, Laws, and Ideal Types* (Durham: Duke University, 1976); F. Stuart Chapin, "Definition of Definitions of Concepts" *Social Forces* 18 (December 1939), 153- 60; Bernard P. Cohen, *Developing Sociological Knowledge*, 2nd ed. (Chicago: Nelson-Hall, Inc, 1989); Collier and Mahon, "Conceptual 'Stretching'"; Gordon J. DiRenzo, "Conceptual Definition in the Behavioral Sciences," in *Concepts, Theory, and Explanation in the Behavioral Sciences*, ed. Gordon J. DiRenzo (New York: Random House, 1966), 6-18; Richard G. Dumont and William J. Wilson,"Aspects of Concept Formation, Explication, and Theory Construction in Sociology," *American Sociological Review* 32 (December 1967), 985-95; George J. Graham, Jr. , *Methodological Foundations for Political Analysis* (Waltham, MA: Xerox College Publishing, 1971); Carl G. Hempel, "Fundamentals of Concept Formation in Empirical Science," *Foundations of the Unity of Science* 2 (1952); Kaplan, *Logic of Inquiry*; Lakoff, *Women, Fire*; Leonard Linsky, "Reference and Referents," in *Problems in the Philosophy of Language*, ed. Thomas M. Olshewsky (New York: Holt, Rinehart and Winston, 1969); John William Miller, *The Definition of a Thing, with Some Notes on Language* (New York: W.W. Norton, 1980); Arthur Pap, "Theory of Definition," in *Problems in the Philosophy of Language*, ed. Thomas M. Olshewsky (New York: Holt, Rinehart and Winston, 1969); Hilary Putnam, "The Meaning of 'Meaning'," in *Mind, Language and Reality, Philosophical Papers, Volume 2* (Cambridge: Cambridge University Press, 1975), 215-71; Robinson, *Definition*; Bertrand Russell,"On Denoting," in Olshewsky, *Problems in the Philosophy of Language*; Sartori, "Tower of Babble," 28-30; Sartori, "Guidelines," 72-85; Arthur L. Stinchcombe, *Constructing Social Theories* (New York: Harcourt, Brace, 1968); P.F. Strawson, "On Referring," in Olshewsky, *Problems in the Philosophy of Language*.

into *any* of the foregoing schools.[19] Indeed, social science is replete with folk wisdom on the matter of concept formation. We applaud the virtues of clarity, making sense, seizing the object, relevance, rigor, standardization, systematicization, theoretical yield, utility, and parsimony, and decry the evils of ambiguity, vagueness, indefiniteness, triviality, and idiosyncrasy. Yet, these familiar admonitions are *themselves* rather vague, and perhaps contradictory, suggesting the need for further research.[20] We should like very much to follow Locke's advice to "strip all . . . terms of ambiguity and obscurity."[21] The question is, how shall we do so?

The Argument

Though concept formation is not reducible to any of the foregoing criteria, that does not mean that we should toss up our hands and conclude that concept formation is a matter of 'context,' or that it is infinite (or unspecifiable) in its diversity.[22] To be sure, it is a highly contextual process. But this opens

19. See, e.g., Martin Bulmer and Robert G. Burgess, "Do Concepts,Variables and Indicators Interrelate?" in *Key Variables in Social Investigation*, ed. Robert G. Burgess (London: Routledge & Kegan Paul, 1986); David Collier and Steven Levitsky, "Democracy with Adjectives: Conceptual Innovation in Comparative Research," *World Politics* 49 (April 1997): 430-51; Carl G. Hempel, "Typological Methods in the Social Sciences," in *Philosophy of the Social Sciences: A Reader*, ed. Maurice Natanson (New York; Random House, 1963); Hempel, *Philosophy of Natural Science* (Englewood Cliffs, NJ: Prentice-Hall, 1966); Kaplan, *Logic of Inquiry*; John C. McKinney, *Constructive Typology and Social Theory* (Appleton-Century-Crofts, 1966); Eugene J. Meehan, *The Foundations of Political Analysis: Empirical and Normative* (Homewood, IL: Dorsey Press, 1971); Mill, *System of Logic*; Tadeusz Pawlowski, *Concept Formation in the Humanities and the Social Sciences* (Boston: D. Reidel, 1980). See also the extensive bibliography in David Collier and Henry Brady, "Studies of Major Concepts in Political Analysis: An Illustrative Inventory," unpublished manuscript (Berkeley: Department of Political Science, University of California at Berkeley).

20. Consider, for example, Sartori's ("Guidelines," 63) Rule 1: "Of any empirical concept always, and separately, check 1) whether it is ambiguous, that is how the meaning relates to the term; and 2) whether it is vague, that is how the meaning relates to the referent."

21. Quoted in Richardson, *Definition*, 70.

22. "Words," wrote Virginia Woolf, "are the wildest, freest, most irresponsible, most unteachable of all things. Of course, you can catch them and sort them and place them in alphabetical order in dictionaries. But words do not live in dictionaries; they live in the mind. . . . Thus to lay down any laws for such irreclaimable vagabonds is worse than useless. A few trifling rules of grammar and spelling are all the constraint we can put on them. All we can say about them, as we peer at them over the edge of that deep, dark and only fitfully illuminated cavern in which they live — the mind — all we can say about them is that they seem to like people to think and to feel before they use them, but to think and to feel not about them, but about something different. They are highly sensitive, easily made self-conscious. They do not like to have their purity or their impurity discussed. . . . Nor do they like being lifted out on the point of a pen and examined separately. They hang together, in sentences, in paragraphs, sometimes for whole pages at a

Table 1. Criteria of Conceptual Goodness

1. Familiarity	How familiar is the concept (to a lay or academic audience)?
2. Resonance	Does the chosen term ring (resonate)?
3. Parsimony	How short is a) the term and b) its list of defining attributes (the intension)?
4. Coherence	How internally consistent (logically related) are the instances and attributes?
5. Differentiation	How differentiated are the instances and the attributes (from other most-similar concepts)? How bounded, how operationalizable, is the concept?
6. Depth	How many accompanying properties are shared by the instances under definition?
7. Theoretical Utility	How useful is the concept within a wider field of inferences?
8. Field Utility	How useful is the concept within a field of related instances and attributes?

further questions: which contexts matter (or should matter), and under what circumstances? Despite the complexities these questions introduce, I believe that it *is* possible to arrive at a single account of concept formation within the social sciences that is at once comprehensive and reasonably concise. Goodness in concept formation is most fruitfully understood as an attempt to mediate among eight criteria: familiarity, resonance, parsimony, coherence, differentiation, depth, theoretical utility, and field utility (see Table 1).

The common-sense conclusion from this eight-part list is to say that concepts may be formed with a wide variety of purposes and may fulfill a wide variety of attendant functions in social science research. I wish to carry the argument one step further. *Of course* differently constructed concepts will emphasize and deemphasize different demands. In this sense, they each "do their own thing" (as work on concept-types implies). But the suppression of one or more demands does not go unnoticed by other social scientists. A concept with high theoretical utility that offends norms of established usage (or vice-versa) is less serviceable for this fact. Thus, although particular criterial demands are often ignored, they are ignored at a cost. This points to the notion of concept formation as a set of *tradeoffs*—a tug of war among these eight desiderata. Concept formation is a fraught exercise—a set of choices which may have no single 'best' solution, but rather a range of more-or-less acceptable alternatives. This eight-part criterial framework provides a quick and ready schema by which the

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time. They hate being useful; they hate making money; they hate being lectured about in public. In short, they hate anything that stamps them with one meaning or confines them to one attitude, for it is their nature to change" (*The Death of the Moth*, quoted in Richardson, *Definition*, 65).

strengths and weaknesses of alternative conceptualizations can be assessed, and the process of concept formation moved forward.

The argument of the paper proceeds in two stages. In the first section I set forth the eight criterial demands, showing why each is important and, at the same time, why concept formation is not *reducible* to that criterion alone. In the following section, I discuss some broader implications of this framework for the conduct of social science research. Specifically, I argue (a) that other norms that might be supposed to guide the process of concept formation can be subsumed within the foregoing criteria, or are not worth pursuing; (b) that different sorts of social-science concepts (e.g., 'theoretical' and 'observational' terms) nonetheless respond to a common set of definitional demands; (c) that the notion of tradeoffs, rather then specific rules (*a la* Sartori), best guides and describes the complex process of concept formation; and (d) that standards of conceptual adequacy are not entirely illusory, so long as they are understood as *relative*—relative, that is, to alternative formulations that might be constructed for any particular concept.

I. Criteria

Familiarity

The degree to which a new definition "makes sense," or is intuitively "clear," depends critically upon the degree to which it conforms, or clashes, with established usage—within everyday language and within a specialized language community. If a term is defined in a highly idiosyncratic way it is unlikely to be understood, or retained. "The supreme rule of stipulation," writes Richard Robinson, "is surely to *stipulate as little as possible*. Do not change received definitions when you have nothing to complain of in them."[23] Thus, the criterion of *familiarity* must be understood, like other criteria, as a matter of degrees. There should be, in any case, a demonstrable fit between new and old meanings of a given term.

Familiarity in the *definition* of a given term is achieved by incorporating as many of its standard meanings in the new definition as possible, or at least by avoiding any glaring contradiction of those meanings. Here it is often helpful to distinguish between the 'core' features of a term—those which are generally agreed-upon and which have a secure etymological standing in the history of the term—and those which are peripheral. Dropping a peripheral feature will impose a smaller loss in familiarity than the jettisoning of a core feature.

Familiarity in the *term* is achieved by finding that word within the exist-

23. Robinson, *Definition*, 80.

ing lexicon which, as currently understood, most accurately describes the phenomenon under definition. Where several existing terms capture the phenomena in question with equal facility—as, for example, the near-synonyms *worldview* and *weltanschauung*—achieving familiarity becomes a matter of finding the term with the greatest common currency. Simple, everyday terms of a researcher's native language are, by definition, more familiar than terms drawn from languages which are dead, foreign, or highly specialized. Where no terms within the existing general or social-science lexicon adequately describe the phenomena in question the writer is pressed to invent a new term. Yet, neologism is the greatest violation of the familiarity criterion, for it involves the creation of an entirely new term with no meaning at all in normal usage. All other things being equal, a writer should turn to this expedient only when no other semantic options present themselves. *"Let us not stipulate until we have good reason to believe that there is no name for the thing we wish to name,"* notes Robinson emphatically.[24] Durkheim's comments on the matter are also pertinent.

> In actual practice, one always starts with the lay concept and the lay term. One inquires whether, among the things which this word confusedly connotes, there are some which present common external characteristics. If this is the case, and if the concept formed by the grouping of the facts thus brought together coincides, if not totally (which is rare), at least to a large extent, with the lay concept, it will be possible to continue to designate the former by the same term as the latter, that is, to retain in science the expression used in everyday language. But if the gap is too considerable, if the common notion confuses a plurality of distinct ideas, the creation of new and distinctive terms becomes necessary.[25]

At the same time, we ought not visualize the invention of new terms as qualitatively removed from the redefinition of old terms. Neologisms, while rejecting ordinary language, strive at the same time to re-enter the universe of intelligibility. They are never simply nonsense words; they are, instead, new combinations of existing words (e.g., *bureaucratic-authoritarianism*) or roots (e.g., *polyarchy, heresthetic*), or terms borrowed from other time-periods (e.g., *corporatism*), other language communities (e.g., *equilibrium*), or other languages (e.g., *laissez faire*). By far the most fertile grounds for neologism have

24. Robinson, *Definition*, 81.
25. Durkheim, *Rules of Sociological Method*, 37. Mill (*System of Logic*, 24) advises that since "the introduction of a new technical language as the vehicle of speculations on subjects belonging to the domain of daily discussion, is extremely difficult to effect, and would not be free from inconvenience even if effected, the problem for the philosopher. . . is, in retaining the existing phraseology, how best to alleviate its imperfections."

been Classical (e.g., *Id, communitas, polis*), religious (e.g., *hermeneutics*), and personal (e.g., *Marxism, Reaganism*).[26] In all these cases, words, or word-roots, are imported from their normal contexts to a rather different context where their definition takes on a new meaning, or additional senses. However severe the semantic stretch, at least some of the original properties of such terms remain intact.[27]

Resonance

Why do some terms stick while others, with virtually identical meanings, disappear? Why are some efforts successful at reformulating a field or a problem, and others (with the same general argument) often overlooked? One factor in the knowledge game which relates directly to concept formation is the "cognitive click" of a given term, which I shall call *resonance*.

"Makers, breakers, and takers," "exit, voice, and loyalty," and "civic culture" are all examples of resonance at work.[28] As is apparent, the demand for resonance is often fulfilled by reference to nearby terms, which may form part of a larger typology. If two of three terms in a typology end in the same suffix (*-tion, -ity*, . . .) it may be desirable to find a third with the same suffix. Rhyming schemes are wonderful mnemonic devices.

To be sure, the search for resonance is often at odds with the satisfaction of other criteria. The search for a catchy label tempts writers to violate the familiarity criterion, making up new words to replace existing words or choosing exotic options over plain ones. There are enough cases of abuse that within social science circles snazzy labels are often regarded as terminologi-

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26. On polyarchy, see Robert A. Dahl, *Polyarchy: Participation and Opposition* (New Haven, Yale University Press, 1971). On heresthetic, see William H. Riker, *The Art of Political Manipulation* (New Haven: Yale University Press, 1986). On corporatism, see David Collier, "Trajectory of a Concept: 'Corporatism' in the Study of Latin American Politics," in *Latin America in Comparative Perspective*, ed. Peter Smith (Boulder: Westview Press, 1995), 135-62; Philippe Schmitter C., "Still the Century of Corporatism?" in *The New Corporatism*, ed. Frederick B. Pike and Thomas Stritch (Notre Dame: University of Notre Dame Press, 1974).

27. Robinson (*Definition*, 55) notes: "Men will always be finding themselves with a new thing to express and no word for it, and usually they will meet the problem by applying whichever old word seems nearest, and thus the old word will acquire another meaning or a stretched meaning. Very rarely will they do what A. E. Housman bade them do, invent a new noise to mean the new thing."

28. See Stephen D. Krasner, *Defending the National Interest: Raw Materials Investments and U.S. Foreign Policy* (Princeton: Princeton University Press, 1978); Albert O. Hirschman, *Exit, Voice, Loyalty: Responses to Decline in Firms, Organizations, and States* (Cambridge: Harvard University Press, 1970); Gabriel A. Almond and Sidney Verba, *Civic Culture: Political Attitudes and Democracy in Five Nations* (Princeton: Princeton University, 1963). See also discussion in Collier and Levitsky, "Democracy with Adjectives," 450.

cal tinsel—rhetorical covers for poor research. Yet, before we dismiss the criterion of resonance as frivolously aesthetic and obfuscatory, we should consider the reasons why scholars continue to search for words which are not only clear, but also captivating.

Effective phrase-making can no more be separated from the task of concept formation than good writing can be separated from the task of research. It seems fairly obvious that 'ideology' resonates in a way that 'belief-system' does not, which may explain something about the persistence of the former in the face of a fairly concerted academic onslaught over the past several decades. One might also consider Marx's choice of *proletariat* over 'working classes.' Would his work have had the same impact had he stayed with the terminological status quo?

If resonance is important in reconceptualizing old ideas, as well as in coining new terms, how does one achieve this quality? This is a very difficult question to answer, or to predict, since there are so many nonsemantic (auditory, visual, and perhaps even olfactory) cues to which readers commonly respond. Resonance, for example, might be derived from a word's metaphoric, synechdotic, alliterative, or onomatopoetic value, its rhyming scheme or rhythm (number of syllables, stress, . . .). These are matters that we need not pursue here. The point is, concepts aspire not simply to clarity but also to power, and power is carried by a term's resonance as well as its meaning.

Parsimony

Good concepts do not have endless definitions. It should be possible to say what it is one is talking about without listing a half-dozen attributes. This goes almost without saying.[29] At the same time, it should be pointed out that the distinction between the formal 'definition'—the intension—and 'accompanying properties' is rarely hard and fast. On this head, many hairs have been split. About all that one can say *in general* about this problem is that the benefits a prospective attribute may bring to a concept must be weighed against the desideratum of parsimony. A long intension, even if composed of closely related attributes, will create a cumbersome and unappealing semantic vehicle. 'Ideology,' as we shall have occasion to observe, is so overloaded with definitional baggage that it barely manages to shuffle across the page. All reconceptualizations of the term jettison some of this baggage; indeed, the term means almost nothing at all if all of its possible attributes are included.

Less often noted, the goal of parsimony also properly applies to the *term* itself. Consider the options for ideology-like phenomena. One might call them

29. See, e.g., Sartori, "Guidelines," 40, 54-55; Fred W. Riggs, "The Definition of Concepts" in Sartori et al., *Tower of Babel*, 39-76.

'belief-system,' 'symbol-system,' or 'value-system,' but none of these possible replacements is as short and to-the-point as that old standby, ideology. If qualified by the adjective 'political' (e.g., 'political belief-system'), these alternate terms become clumsier still. Arguably, ideology's endurance—in the face of repeated criticism from the academic establishment—is due to its admirable compactness. I have argued, for example, that we should preserve a broad definition for ideology—one encompassing all relatively coherent sets of attitudes, values, and beliefs about politics—because we need a way to talk about these phenomena and there is no other eligible (parsimonious and reasonably familiar) alternative.[30] If a more restrictive definition is adopted, we lose the capacity to capture these phenomena in a single term, and must forever say "relatively coherent sets of attitudes, values, and beliefs about politics" (instead of the more parsimonious 'ideology').

A concept *is* an abbreviation, just as sequences of words (sentences, phrases, books) are abbreviations of things. "By the stipulative substitution of a word for a phrase, language is abbreviated," notes Robinson.

> What can now be said could also have been said previously, without using the new rule or the new name; but it can now be said in fewer words, because the thing can now be indicated by a single name, whereas formerly a descriptive phrase was required. The value of such timesaving does not lie merely or mainly in leaving more time for other activities. Abbreviation not merely shortens discourse; it also increases understanding. We grasp better what we can hold in one span of attention, and how much we can thus hold depends on the length of the symbols we have to use in order to state it. Abbreviations often immensely increase our ability to understand and deal with a subject.[31]

The Chinese language takes this quest for abbreviation to what we in the western world would consider to be an extreme, substituting single characters for whole English sentences. Logical and mathematical languages also prize brevity. The point is, natural languages (of any sort) also seek to reduce human experience. Reduction, of course, is not the only task of language, just as it is not the only task of concepts in social science. But consider: key concepts are likely to be employed repeatedly and insistently in a given work. To say 'political belief-system' once in a paragraph is enough; to say it thrice in a paragraph is awkward and tendentious. Single-word concepts, particularly those that trip easily off the tongue, can be used unobtrusively. All other

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30. Proposed substitutes violate the parsimony criterion (e.g., 'political belief-system'), or the intelligibility/familiarity criterion (e.g., 'weltanschaaung'). See Gerring, "Ideology."

31. Robinson, *Definition*, 68.

things being equal, 'worldview' is preferable to 'weltanschaaung,' 'walking' preferable to 'perambulation,' and concepts with fewer definitional predicates preferable to those with a multitude (e.g., ideology).[32]

Bentham's words on this matter are amusing, and equally instructive:

> Blessed be he forevermore, in whatever robe arrayed, to whose creative genius we are indebted for the first conception of those too short-lived vehicles which convey to us as in a nutshell the essential character of those awful volumes which at the touch of the sceptre become the rules of our conduct and the arbiters of our destiny: 'The Alien Act,' 'The Turnpike Act,' 'The Middlesex Waterworks Bill,' and so on.

> How much better they serve than those authoritative masses of words called *titles*, by which so large a proportion of sound and so small a proportion of instruction are at so large an expense of attention granted to us, such as—'An Act to explain and amend an act entitled An Act to explain and amend . . .' Coinages of commodious titles are thus issued day by day throughout the session from an invisible though not unlicensed mint. But no sooner has the last newspaper of the last day of the session made its way to the most distant of its readers, than all this learning, all this circulating medium, is as completely buried in oblivion as a French assignat. So many yearly strings of words, not one of which is to be found in the works of Dryden, with whom the art of coining words fit to be used became numbered among the lost arts, and the art of giving birth to new ideas among the prohibited ones![33]

Coining words fit to be used entails finding words, or combinations of words, that are *parsimonious*. 'An Act to explain and amend. . .' cannot be remembered—nor, if it could, would it facilitate communication. A long neologism is an unseemly neologism.

Coherence

Arguably, the most important criterion of a good concept is its internal coherence—the sense in which the attributes that define the concept, as well as the characteristics that actually characterize the phenomena in question, "belong" to one another. There must be some sense of *coherence* to the grouping, rather

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32. It may be observed that parsimony in a term occasionally conflicts with parsimony in a definition. 'Ideology,' for example, scores well on the first and poorly on the second. 'Belief-system' scores poorly on the first, but well on the second.

33. Jeremy Bentham, *Bentham's Handbook of Political Fallacies* [1834] ed. Harold A. Larrabee (New York: Thomas Y. Crowell, 1952), 10-11.

than simply a coincidence in time and physical space.

Ideology provides a particularly glaring case of inconsistency, having been defined by some authors as a system of ideas which "promote[s] social change," and by others as a system of ideas which "prevent[s] change." It "makes use of and seeks to base itself upon philosophical ideas, arguments and theories," yet also "advocates action or impels to action." It "contains statements of fact," yet also expresses "morals, values, etc." It is "associated with the whole society or community," yet "places supreme significance upon one particular class or group." It "promotes, serves or reflects interests," yet is "unconsciously motivated."[34] The coherence criterion calls for the analyst to make choices among each of these contrdictory attributes, and—if possible—to consolidate those attributes around a single core principle.

The problem of coherence is usually more subtle, involving attributes which are not mutually contradictory, but which bear no obvious relationship to one another. Attributes may be logically or functionally related. The hypothetical concept 'curly head-of-state' fails on both counts, since the two attributes *curly-headed* and *head-of-state* bear no apparent relationship to one another. If the concept identifies phenomena whose shared properties are not related in some manner—regardless of their level of differentiation—they are not likely to make sense. More precisely, they will generate several senses. In each case it is the degree of similarity (i.e., internal coherence) among the items in the set that is at issue.

The most coherent definitions are those identifying a 'core' or 'essential' meaning.[35] Robert Dahl, in his first influential work on 'power,' sets out to discover "the central intuitively understood meaning of the word," "the primitive notion [of power] that seems to lie behind all [previous] concepts."[36] This *essentializing* approach to definition is common (and, indeed, often justified). The core meaning of *democracy*, for example, is often thought to be rule by the people. This may be viewed as the single principle behind all other definitional characteristics, associated characteristics, and usages of the term. When one says *democracy*, what one is *really* talking about is *rule by the people*. To the extent that this reductionist view is successful—to the extent,

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34. All these examples are drawn from Malcolm B. Hamilton, "The Elements of the Concept of Ideology" *Political Studies* 35 (1987): 20-21.

35. An 'essential' or 'real' definition is defined as: "Giving the essence of a thing. From among the characteristics possessed by a thing, one is unique and hierarchically superior in that it states (a) the most important characteristic of the thing, and/or (b) that characteristic upon which the others depend for their existence" (Angeles, *Dictionary of Philosophy*, 57). See also Mill, *System of Logic*, 71.

36. Robert A. Dahl, "The Concept of Power," [1957] in *Political Power: A Reader in Theory and Research*, ed. Roderick Bell, David V. Edwards, and R. Harrison Wagner (New York: Free Press, 1969), 79-80.

that is, that a single principle is able to subsume various uses and instances of the concept—the highest possible level of coherence has been achieved in that concept. (It will be noted that 'core' conceptualizations are also, conveniently, parsimonious ones.)

Each of the proposed core definitions for *ideology* is an attempt to restore coherence to the tangled set of attributes associated with this concept by pointing to a fundamental attribute that successfully explains, or resolves contradictions among, other attributes.[37] It should be obvious that coherence in a term is usually fairly easy to achieve if one or more of the term's traditional meanings are overlooked. Thus, one may specify a core attribute for ideology and include in the concept only those peripheral characteristics that mesh nicely with the chosen core meaning (ignoring all other attributes evoked by ordinary usage of the term). Again, we have a situation in which concept formation involves trade-offs between different criteria.

Differentiation

The flip side of internal coherence is external *differentiation*, or boundedness. Indeed, it is hardly possible to have one without the other, as the carving-nature-at-the-joints metaphor suggests. "We call a substance silver," writes Norman Campbell, in his pathbreaking *Foundations of Science*,

> so long as it is distinguished from other substances and we call all substances silver which are indistinguishable from each other. The test whether a property is a defining or a non-defining property rests simply on the distinction between those properties which serve to distinguish the substance from others and those which it possesses in common with others. Any set of properties which serve to distinguish silver from all other substances will serve to define it.[38]

Similarly, with social-science concepts like 'state,' we want to be able to distinguish it from state-like entities (tribes, provinces, empires, and so forth).[39] What is at issue is the way in which a given concept relates to most-similar concepts. A definition of 'car,' for instance, will probably not bother to tell us that it is greasy—not because it isn't true, but because it does not help us in differentiating car from 'truck' or 'bicycle.' A concept's differentiation derives

37. See Gerring, "Ideology."

38. Norman Robert Campbell, *Physics: The Elements* [1919]. Reprinted as *Foundations of Science* (New York: Dover, 1957), 49.

39. The accuracy of a given attribute in distinguishing one concept from a field of related concepts has been given the name 'cue validity' in Rosch, et al. "Basic Objects" (discussed in Lakoff, *Women, Fire*, 52).

from the clarity of its borders within a field of similar terms. A poorly bounded concept has definitional borders which overlap neighboring concepts.

The importance of differentiation is brought out nicely in the OED's definition of 'definition,' which (among other things) asserts that defining an object is "the act or product of marking out, or delimiting, the outlines or characteristics of any conception or thing."[40] The two terms (definition and differentiation) are very close in meaning. As Pitkin explains, "the meaning of an expression is delimited by what might have been said instead, but wasn't. Green leaves off where yellow and blue begin, so the meaning of 'green' is delimited by the meanings of 'yellow' and 'blue.'"[41]

Ideology is an excellent example of a concept without clear borders. It is difficult, one finds, to use the concept of *ideology* without tripping over the neighboring concepts of belief-system, worldview, value-system, symbol-system, myth, public philosophy, political philosophy, political culture, public opinion, policy agenda, political rhetoric, and political discourse. If, however, we can clarify, by adjusting the attributes of the intension, how ideology differs from these other terms then we have increased the differentiation of the concept. For purposes of maximum differentiation (ignoring the demands of other conceptual criteria), one might define ideology as: (a) composed of values, beliefs, and attitudes, but not issue-positions and policy results (differentiating it from programs, policies, agendas, and actions); (b) coherent, but not rigorously and systematically so (differentiating it from philosophical systems); (c) directly concerned with politics, and acting as a guide to political action (in contrast with those many near-synonyms which imply only a minimal connection to the real world of politics); (d) 'partisan' (oppositional, engaged); (e) persistent through time (as distinguished from public opinion and policy agendas); and (f) manifested in speech or in written form but not reducible to language (as distinguished from forms of discourse). With these defining characteristics, the concept of ideology comes about as close as one can come, given the sheer number of its near-synonyms, to fulfilling the criterion of differentiation. Without such differentiating characteristics, readers are likely to wonder how—or whether—ideology differs from related con-

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40. Reprinted in Chapin, "Definition of Definitions," 153. Angeles (*Dictionary of Philosophy*, 56) finds the Latin origins of the term in the verb *definire*, which is translated as 'to limit,' 'to end,' 'to be concerned with the boundaries of something.' We can rightly substitute *phenomena* for 'objects' and 'things' in the foregoing definitions, since for our purposes it matters little whether the extension is composed of thing-like phenomena or not. Thus, my use of operationalization is not equivalent to *operationism*, by which "the meaning of every scientific term must be specifiable by indicating a definite testing operation that provides a criterion for its application" (Hempel, *Philosophy of Natural Science*, 88). See also P. W. Bridgman, *The Logic of Modern Physics* (New York: Macmillan, 1927).

41. Pitkin, *Wittgenstein*, 11.

cepts, and why none of these other terms were chosen to label the concept under definition.

Some years ago, Hannah Arendt bemoaned the general lack of attention paid by political scientists to distinctions between 'power,' 'force,' 'authority,' and 'violence.'[42] In the interim, this lack of attention has been followed by what some might call a surfeit of attention.[43] But Arendt's point is still good: useful definitions define a term *against* related terms, telling us not only what a concept is, but also what it is not.[44] Internal coherence is inseparable from external differentiation.

It should be clear from the foregoing discussion that differentiation refers not only to semantic space (the degree to which a concept's definitional borders are clear) but also to physical space (the degree to which a concept's borders in time and space are clearly demarcated).[45] What we wish to know about a social science concept is not merely what it is, but also *where* it is—which is to say, where it *isn't*. In order to perform this task effectively a concept must be sufficiently bounded.

Differentiation, like all criterial demands, is a matter of degrees. Contrary to the classical view of concepts—where defining attributes are to be found always-and-only in the extension—most social science concepts must take a pragmatic approach to the goal of establishing differentiation (for the simple reason that there *are* no always- and-only attributes). Table 2 lays out the possibilities. Where unique properties are present (category 1), all others are superfluous (for purposes of establishing differentiation). It hardly matters whether the property in question is invariably present, or invariably absent, although in the latter case the definitional attribute will be residual. Where unique properties do *not* exist, we are forced to rely on the less perfect expedient of *sometimes-differentiating* attributes in order to establish the boundaries of a concept. In such cases—including the vast majority of abstract concepts—the "minimal definition strategy" that Sartori advises simply makes no sense.[46] One is compelled in the case of *ideology*, for example, to place quite

42. Hannah Arendt, *On Violence* (New York: Harcourt, Brace, 1970), 43.

43. Steven Lukes, *Power* (New York: New York University Press, 1986) and Peter Morriss, *Power: A Philosophical Analysis* (New York: St. Martin's Press. 1987) review this literature.

44. There may be circumstances when a scholar justifiably conflates the definitions of several related terms, as Dahl and others appear to do with power, force, influence, et al. (see Dahl, "Concept of Power"). Yet, as many writers have noticed, there is no such thing *in ordinary usage* as a pure synonym—i.e., two words that may be exchanged for one another with absolutely no change of meaning or import. Thus, the effort to combine the meanings of one or more words in a single concept, while doubtless useful for certain purposes, always involves some loss of familiarity in the resulting concept.

45. All key social science concepts, I argue (below), perform a referential function.

46. See Sartori, "Tower of Babble," 35.

Table 2. Differentiation: A Relative Matter

	ATTRIBUTES FOUND *IN* THE EXTENSION	ATTRIBUTES FOUND *NEAR* THE EXTENSION
1. Always differentiating	Always	Never
	Never	Always
2. Sometimes differentiating	Always	Sometimes
	Sometimes	Always
	Sometimes	Never
	Never	Sometimes
3. Non- differentiating	Always	Always
	Sometimes	Sometimes
	Never	Never

a multitude of properties into the intension in order to distinguish this concept from its many near-synonyms. We may as well acknowledge the fact that the borders of most concepts are established in a rather piecemeal fashion: *Property X* may be invoked to distinguish the concept from one neighboring concept, and *Property Y* to distinguish it from another—even though neither property resides exclusively within the extension.

An important distinction must be drawn here between differentiation and *operationalization*. A differentiated concept is a concept that is operationalizable—its referents can be located in physical space. However, the actual operationalization of a concept is a task separate from concept formation. Concept formation refers to the choice of terms, attributes, and entities to be defined, *not* to the indicators used to find them. As Jevons remarks, "it will often happen that the so-called important points of an object are not those which can most readily be observed." In this situation it is the important points—whatever they may be—not the observables (indicators), that rightly define the object.[47]

Yet, to say that operationali*zability* is inseparable from differentiation is to say a good deal about the sort of concepts we are likely to favor in social science research. Alienation, anomie, charisma, collective conscience, dogmatism, equality, false consciousness, hegemony, ideology, legitimacy, marginalization, mass society, national character, pattern variables, petty bourgeois, rationalization, sovereignty, status anxiety, and other fuzzy concepts have a pox on them. It is the pox of insufficient differentiation (or, if you prefer, nonoperationalizability). If you don't know it when you see it, then you can't tell it (the concept) from other things. Such a concept is (*ceteris paribus*) less

47. W. Stanley Jevons, *The Principles of Science* [1877] (New York: Dover, 1958), 708.

useful. Barbara Geddes notes that *state autonomy* is generally "inferred from its effects rather than directly observed.

> No one, it seems, is quite sure what 'it' actually consists of. State auton-
> omy seems at times to refer to the independence of the state itself, the
> regime, a particular government, some segments or agencies of the gov-
> ernment, or even specific leaders. It seems the phrase can refer to any
> independent force based in the central government.[48]

With respect to *democracy*—another poxed term—Dahl claims "The gap between the concept and operational definition is generally very great, so great, indeed, that it is not always possible to see what relation there is between the operations and the abstract definition."[49] This does not mean, of course, that we should immediately jettison these fuzzy terms. (Indeed, jetti-soning 'democracy' is likely to cause more problems than it solves.) It means, very simply, that differentiation is a problem. Any study employing these cat-egories will have to work hard to develop definitions that are sufficiently bounded to do real work.[50]

Rather than viewing operationalization as simply an afterthought—tacked on after the act of concept formation is already complete—I would argue that it is integral to concept formation. Concepts that cannot be effectively opera-tionalized, or can be operationalized in too many different ways, cannot be differentiated.

Depth

The larger purpose of concept formation is not simply to enhance the clarity of communication (by showing where, precisely, the borders between con-cepts are located), but also the efficiency of communication. We are looking for a way to group instances/characteristics that are commonly found together

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48. Barbara Geddes, *Politicians' Dilemma: Building State Capacity in Latin America* (Berkeley: University of California Press, 1996), 5.

49. Robert Dahl, "Power," in *International Encyclopedia of the Social Science* 12, ed. David L. Sills (New York: Macmillan, 1968), 414. Quoted in Geoffrey Debnam, *The Analysis of Power: Core Elements and Structure* (New York: St. Martin's Press, 1984), 2.

50. Generally, the quest for bounded concepts leads one to concrete, 'observational' con-cepts. This, it might be said, is the virtue of small concepts (their specificity, and hence clear bor-ders). Indeed, it is difficult to imagine a larger concept being more bounded than the smaller con-cepts within its purview. 'State' is unlikely to be more bounded than 'executive,' 'parliament,' and 'bureaucracy.' However, this does not mean that all observational concepts are bounded, and all 'abstract' terms fuzzy. Consider the various terms used to describe parts of river—e.g., 'delta,' 'source,' 'beach,' and so forth. These, too, are shifty.

so that we can use the concept's label as shorthand for those instances/characteristics. The utility of a concept is enhanced by its ability to 'bundle' characteristics. The greater the number of properties shared by the phenomena in the extension, the greater the *depth* of a concept.[51]

Within the U.S., the geographic concept of the West is vulnerable to the charge that these states do not share many features in common; the concept, in other words, is not meaning-full. Meaning, in this case, refers to the number of shared attributes that the term calls forth. The deeper or richer a concept, the more convincing the claim that it defines a class of common entities, which are therefore deserving of being called by a single name. The term, in this sense, carries more of a punch—it is, descriptively speaking, more powerful, allowing us to infer many things—the common characteristics of the concept—from one thing, the concept's label. The concept of the South, following the opinion of most historians, would have to be considered deeper than the West, since a much longer list of accompanying attributes can be constructed.

One of the rationales behind the familiar injunction not to define concepts residually (by what they aren't) is rooted in the problem that in doing so we violate the criterion of depth. *Not-X* attributes may be useful for establishing differentiation, but they are not productive of depth. Residual concepts merit the appellation 'shallow'; indeed, in the case of a purely residual concept there is no water at all in the bathtub. *Ceteris paribus*, deep concepts are superior to shallow ones. While for the task of bounding a phenomenon a single reliable trait may be sufficient, the task of *describing* it demands plenitude. Good concepts identify fecund categories.

This is not to say, however, that parsimony and depth are directly at odds with one another. Depth refers to properties that may be defining *or accompanying* (non-definitional). To define 'human' as a rational animal in no way compromises the depth of this category. Indeed, if one considers the sheer number of things that can be said to differentiate humans from other animals, this must be considered an extraordinarily deep concept.

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51. Although rarely acknowledged as a desideratum of concepts *at-large* (but see Arthur L. Stinchcombe, *Theoretical Methods in Social History*, [New York: Academic Press, 1978], 21, 29), the notion of depth is implicit in virtually all descriptions of classificatory methods of definition. Mill (*System of Logic*, 460) defines a *Kind*, for example, as a class of things "distinguished from all others not by one or a few definite properties, but by an unknown multitude of them; the combination of properties on which the class is grounded being a mere index to an indefinite number of other distinctive attributes." The argument here put forth may be viewed, therefore, as an attempt to generalize from classificatory methods of concept formation to concept formation at large. What is true for one, I would argue, is true for the other.

Theoretical Utility

The classic scientific goal of a social science concept is to aid in the formulation of theories, as discussed above.[52] Concepts are the building-blocks of all theoretical structures and the formation of many concepts is legitimately theory-driven. *Anomie, libido, mode of production,* and *charisma* owe their endurance, at least in part, to the theories of Durkheim, Freud, Marx, and Weber. Indeed, these terms have little meaning in the social sciences without these broader theoretical frameworks.

Classificatory frameworks (which I shall consider a species of 'theory') are particularly important since their effort is more explicitly *conceptual* than other sorts of inferences. A classification aims to carve up the universe into comprehensive, mutually exclusive, and hierarchical categories. Within such a schema, a given concept derives much of its utility from its position within this broader array of terms. Ideology, for example, within a general cognitivist framework, has often been used to refer to the highest (i.e., most sophisticated) level of political understanding.[53] This brings with it an emphasis on certain traits like abstraction, sophistication, and knowledge. Other commonly understood features of the concept must be excluded or else the classificatory schema will be violated. Although this involves some sacrifice of familiarity, it may make more sense to appropriate the general term 'ideology,' with all its complications, than to resort to neologism (which of course has its own conceptual costs, as we have discussed). One can think of concepts whose existence is almost *wholly* dependent upon their classificatory utility. Thompson et al.'s *fatalism* and Luebbert's *traditional-authoritarianism* have few external referents.[54] Indeed, they are virtually empty categories, failing the depth criterion miserably. However, these concepts are redeemed to some degree by their utility within broader typologies, which they help to define and delimit. These are extreme cases but they illustrate the more general point that concepts often *categorize*.[55]

But theoretical utility need not be so (shall we say) 'theoretical.' Consider, once again, the concept of ideology. I have argued that we ought to define ideology broadly—to refer to *all* minimally coherent political belief-systems—

52. See sources cited in note 16.

53. See, e.g., Philip E. Converse, "The Nature of Belief Systems in Mass Publics," in *Ideology and Discontent*, ed. David E. Apter (London: Free Press of Glencoe, 1964), 206-61.

54. See Michael Thompson, Richard Ellis and Aaron Wildavsky, *Cultural Theory* (Boulder: Westview Press, 1990) and Gregory M. Luebbert, *Liberalism, Fascism, or Social Democracy: Social Classes and the Political Origins of Regimes in Interwar Europe* (Berkeley: University of California Press, 1991).

55. Indeed, these two terms—concept and category—are often used synonymously (Collier and Mahon, "Conceptual 'Stretching,'" and Taylor, *Linguistic Categorization*).

rather than to adopt a more narrow definition (including, perhaps, only those values and beliefs that are dogmatic) *because we need a way to talk about these things*, and 'political belief-system' is too long and awkward a term to adequately perform this function. Ideology, broadly defined, has a theoretical utility that ideology, narrowly defined, does not. Colloquially stated, "we should possess a name wherever one is needed; wherever there is anything to be designated by it, which it is of importance to express."[56]

Field Utility

To redefine a term, or to invent a new term, involves some resettling of the semantic field in which the term is located. It is impossible, in other words, to redefine one term without redefining others, for the task of definition consists of establishing relationships with neighboring terms. Words are defined with other words. Hence, any change in the original definition involves changes in these relationships. Any redefinition of 'corporatism' necessarily changes our understandings of 'pluralism,' as a redefinition of 'democracy' changes our understandings of 'authoritarianism.' One might suppose that this only occurs in semantically crowded fields, but not in those which are comparatively devoid of competing terms. Not so. Even entirely new concepts—i.e., those based upon discoveries of new entities—must be defined *in terms of* existing concepts, and in that process must transform those original concepts. This observation holds *a fortiori* in the world of social science, where there is very little that is truly new and where, consequently, conceptualization generally takes the form of *re*conceptualizing what we already know.

Insofar as neighboring terms *are* affected by the reconceptualization of a key term, it stands to reason that we should apply the same set of standards to these peripheral, 'spillover' redefinitions as we have applied to the original concept. Reconceptualizations which enhance—or do as little damage as possible—to the utility of neighboring concepts (their levels of familiarity, parsimony, et al.) are, *ceteris paribus*, most desirable. I shall call this goal *field utility*.

The general goal of concept formation at the *field*-level is a semantic/phenomenal field in which every distinct thing (referent) has a distinct name, and every name a distinct referent—a one-to-one correspondence between words and things. Of course, I am well aware that correspondences are rarely so perfect. Yet, all social science conceptualizations strive for this ideal—which, as Sartori points out, maximizes the efficiency and clarity of language in describing the world around us.[57] One wishes, in other words, to avoid the

56. Mill, *System of Logic*, 436.
57. See Sartori, "Guidelines," 38-39. "So necessary is it that, when a thing is talked of, there should be a name to call it by; so conducive, not to say necessary, to the prevalence of reason and

problem of the "homeless entity"—a phenomenon with all the extensional characteristics of a good concept (coherence, differentiation, depth, theoretical utility), but no name.[58] One wishes, at the same time, to avoid the problem of the entity-less concept—a term without a corresponding referent.

The latter problem demands further commentary. In redefining concepts it is easy to steal referents from neighboring terms, leaving these terms as empty categories.[59] Consider the question of American political culture. Perhaps the easiest way to establish a name for oneself as a writer in this cramped field is to select one word amongst the field of terms competing to describe American political norms and folkways—e.g., liberalism, republicanism, protestantism, individualism, equal opportunity, pragmatism, libertarianism, democratic capitalism, freedom, Algerism, Americanism, the frontier spirit —championing its merits against all the previous terms, or showing how it, really, is the key term around which all the others revolve. To be sure, there is nothing wrong with establishing coherence in a definition, but if all one is doing is rearranging the same set of parts into (essentially) the same whole— with a new label—then not much has been accomplished. Alternatively, one may promote a fundamentally new term (e.g., 'American jeremiad' or 'American mission') to refer to the same tried and true referents. It all seems to make sense; in fact, it makes sense much too easily. However, if one keeps in mind the fact that one is reconceptualizing not simply a single term, but rather a field of terms, then it becomes apparent why this sort of terminological legerdemain is illegitimate (or at least less useful): because other, neighboring terms have been deprived of their referents (and hence of their familiarity, coherence, differentiation, depth, and theoretical utility).

The better we can "cover" a given phenomenal and terminological terrain the better are the individual concepts that inhabit that terrain. It is here that the criteria of concept formation, and of classificatory inference dovetail. "What makes a concept significant," writes Abraham Kaplan,

> is that the classification it institutes is one into which things fall, as it were, of themselves. It carves at the joints, Plato said. Less metaphorically, a significant concept so groups or divides its subject-matter that it can enter into many and important true propositions about the subject-

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common sense and moral honesty. . .," writes Bentham (*Bentham's Handbook*, 11). "Not only," writes his intellectual godchild, "should every word perfectly express its meaning, but there should be no important meaning without its word" (Mill, *System of Logic*, 456).

58. Patrick Gardiner, from whom I steal this phrase, has a somewhat different point in mind. See Gardiner, *The Nature of Historical Explanation* [1952] (Oxford: Oxford University Press, 1961), 55.

59. See Sartori, "Guidelines."

matter other than those which state the classification itself. Traditionally, such a concept was said to identify a 'natural' class rather than an 'artificial' one. Its naturalness consists in this, that the attributes it chooses as the basis of classification are significantly related to the attributes conceptualized elsewhere in our thinking. Things are grouped together because they resemble one another. A natural grouping is one which allows the discovery of many more, and more important, resemblances than those originally recognized. Every classification serves some purpose or other. . .: it is artificial when we cannot do more with it than we first intended.[60]

II. Explications and Implications

I have argued that concepts are liable to eight criteria of adequacy—familiarity, resonance, parsimony, coherence, differentiation, depth, theoretical utility, and field utility. Readers may wonder whether these criteria truly exhaust the norms governing concept formation in the social sciences. Specifically, how are we to account for norms like 'clarity,' 'power,' 'adequacy,' 'value-neutrality,' and other desiderata that do not appear in the eight-part framework?

Most of the aforementioned desiderata are, to be sure, beyond reproach. (Who could argue with the notion that a definition "must not be ambiguous"?[61]) Yet, these familiar admonitions are also highly ambiguous, referring to several criterial demands at once. 'Clarity' and 'precision'—like their antonyms, 'ambiguity,' 'vagueness,' and 'indefiniteness'—may refer to coherence or differentiation. 'Power' may refer to coherence, differentiation, depth, or theoretical utility. 'Adequacy' and 'utility' may refer to any or all criteria.[62] In short, it seems useful to disaggregate the project of concept forma-

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60. Kaplan, *Logic of Inquiry*, 50-51. Hempel's observations are similar: "the familiar vague distinction between 'natural' and 'artificial' classifications may well be explicated as referring to the difference between classifications that are scientifically fruitful and those that are not: in a classification of the former kind, those characteristics of the elements which serve as criteria of membership in a given class are associated . . . with . . . extensive clusters of other characteristics. For example, the two sets of primary sex characteristics which determine the division of humans into male and female are each associated . . . with a large variety of concomitant physical, physiological, and psychological traits. It is understandable that a classification of this sort should be viewed as somehow having objective existence in nature, as 'carving nature at the joints,' in contradistinction to 'artificial' classifications, in which the defining characteristics have few explanatory or predictive connections with other traits; as is the case, for example, in the division of humans into those weighing less than one hundred pounds, and all others" (*Aspects of Scientific Explanation*, 147) See also Jevons, *Principles of Science*, 679.

61. Angeles, *Dictionary of Philosophy*, 56.

62. I have therefore used these last two terms to refer to goodness in concept formation at-large.

tion into narrower, more focused parts.

Some desiderata are simply not worth pursuing. The oft-expressed goal of 'value-neutrality,' for example, is plainly impossible to achieve in many contexts.[63] Imagine trying to craft definitions of *slavery, fascism, terrorism*, or *genocide* without recourse to 'pejorative' attributes, or *human rights, democracy*, or *peace* without 'valorizing' attributes. These are stark examples, but the same general problem confronts the choice of definitional attributes of all social science concepts. Ideology, for example, has been defined as dogmatic behavior and thought-patterns,[64] a characteristic few would aspire to. Sometimes the most offensive word or definition is also the most appropriate, even for social science purposes. At the same time, there is no reason to give *preference* to evaluative, over nonevaluative, connotations when defining a term, or in choosing terms. Stripping notions of justice from 'democracy' may indeed be preferable for some purposes—not because justice is an evaluative term, but because it is so difficult to operationalize, and hence differentiate. More importantly, in moving justice into democracy one collapses the boundaries separating these two terms, thus diminishing field utility. The point is, the desirability of an attribute or term-label is irrelevant to its utility in social-science research.

Arguably, *breadth* (scope or range) in a concept is a good thing.[65] The more instances a concept 'covers,' *ceteris paribus*, the more useful that concept will be for social science purposes. However, I think it makes more sense to view breadth as a criterion of *inferences*, rather than of concepts. Consider 'nuclear war.' There is only one case of this—or none (since the U.S. deployment of nuclear weapons effectively ended World War II). Does this make it a poor concept? Should we broaden the range of cases by changing the definition of the concept? (It is not clear how one would do this without utterly violating the normal meanings of 'war' and 'nuclear.') Similarly, one can imagine many concepts with huge extensions—e.g., 'world,' 'person,' 'incident'—which are not terribly useful to us. The number of things a concept refers to, by itself, says nothing about a concept's utility for social science analysis.

63. See Connolly, *Terms of Political Discourse*; Lakoff, *Women, Fire*; Pitkin, *Wittgenstein*; Charles Taylor, "Neutrality in Political Science," in *Readings in the Philosophy of Social Science*, ed. Michael Martin and Lee C. McIntyre (Cambridge: MIT Press, 1994); Peter Winch, *The Idea of a Social Science, and its Relation to Philosophy* (London: Routledge & Kegan Paul, 1958). Finley's discussion of the word 'slave' is particularly apt (M. I. Finley, "Generalizations in Ancient History," in *Generalization in the Writing of History*, ed. Louis Gottschalk [Chicago: University of Chicago Press, 1963] 22-3).

64. See Sartori, "Concept Misformation."

65. This would appear to be the implication of Sartori's work on the tradeoffs between extension and intension (see "Concept Misformation," and "Guidelines").

If I were investigating Britain, France and Germany, but also wanted to say something about Hungary and Poland, it would not make sense to broaden the definition of "Western Europe" to include these two additional cases when one has the handy moniker "Europe" to draw upon. This is a rather obvious example, but it illustrates the absurdity of the assertion that broad definitions are, *ceteris paribus*, better than narrow ones. The relevant question is where the natural boundaries lie, not how large the resultant categories are.

Concept-Types versus Concept-Criteria

Another objection to the criterial framework might be that concepts are not really, as claimed, part of a single enterprise. Rather, what we may have is a set of widely-varying conceptual exercises, each responding to different criteria of adequacy. Indeed, considering the number and diversity of concept-types listed on page 365—ideal-typical, radial, classical, and so forth—my claims for uniformity in concept formation within the social sciences may appear to readers as an exemplary case of conceptual stretching (in the derogatory sense of that term).

To be sure, concepts differ from one another. Yet I would argue that these differences are better understood as differences of degree, rather than of kind. Moreover, and more significantly, those differences that matter (to social science work, that is) can be readily mapped across the eight dimensions of our framework. Work on concept-types is subsumable within the criterial framework. 'Classical' concepts, for example, privilege differentiation; 'ideal-type' concepts emphasize coherence (generally at the expense of differentiation); 'radial' and 'family-resemblance' concepts emphasize coherence, depth, and familiarity; 'polar' concepts emphasize coherence and theoretical utility; and so forth. Each concept-type emphasizes a different conceptual task or tasks— *but not to the total exclusion of other tasks*. Ideal-type concepts have not renounced all claims to differentiation; classical concepts do not eschew all ties to coherence, depth, or standard usage.[66]

66. Interestingly, the notion of an ideal-type is pre-figured in early work by Jevons (*Principles of Science*, 722-24). "Perplexed by the difficulties arising in natural history from the discovery of intermediate forms, naturalists have resorted to what they call classification by types. Instead of forming one distinct class defined by the invariable possession of certain assigned properties, and rigidly including or excluding objects according as they do or do not possess all these properties, naturalists select a typical specimen, and they group around it all other specimens which resemble this type more than any other selected type. 'The type of each genus,' we are told, 'should be that species in which the characters of its group are best exhibted and most evenly balanced.'" Yet Jevons promptly dismisses this pragmatic effort as "a certain laxity of logical method."

Of the connection between ideal-types and empirical reality, Weber (*Methodology of the Social Sciences*, 97) writes: "All expositions for example of the 'essence' of Christianity are ideal

Another division which has attracted great attention (from philosophers of science as well as from linguists) is the distinction between observational (concrete or referential) terms and nonobservational (theoretical or abstract) terms. Useful though this distinction may be in other realms, I think it can be shown that all key social science concepts (except, let us say, those which are purely methodological) play a referential function. The reference may be highly attenuated, but it is nonetheless always present.

Consider, as an example, the concept of 'justice.' If ever there was a social science concept of high-order abstraction, this is surely it. Yet, even here, one is at pains to find a social science discussion of the topic without an 'external' (real-life, actual, physical, observational, . . .) referent. Contemporary philosophers and political theorists are *also* concerned with questions of justice, and routinely debate concrete instances and specific policies. John Rawls's *Theory of Justice,* the primary fount of contemporary debate, is an excellent case in point. Rawls and his challengers (e.g., Michael Walzer, Robert Nozick, and Ronald Dworkin), wish to know not only what justice is "in the abstract" but also how it might enter into questions of taxing and spending.[67] What justice means in the academy is not—or at least not *rightly*—separable from what it means in the street.

In sum, although concept-types offer a useful shorthand way of talking about certain issues in concept formation, they do not offer a comprehensive explanation of that process. Particular concept-types are best understood as a matter of *prioritization,* a sacrifice of certain conceptual virtues for the more firm possession of others. There are, in short, no pure types.

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types enjoying only a necessarily very relative and problematic validity when they are intended to be regarded as the historical portrayal of empirically existing facts." However tenuous the connection to reality, it seems clear from Weber's exposition that ideal-type concepts must bear *some* relationship to empirically existing phenomena in order to be of use to social science. The *relative* nature of conceptual adequacy is also recognized (at least implicitly) in the following comments by Hempel. "Cognitive significance in a system is a matter of degree: significant systems range from those whose entire extralogical vocabulary consists of observation terms, through theories whose formulation relies heavily on theoretical constructs, on to systems with hardly any bearing on potential empirical findings." Carl Hempel, "Empiricist Criteria of Cognitive Significance: Problems and Changes," in *The Philosophy of Science*, ed. Richard Boyd, Philip Gasper, and J.D. Trout (Cambridge: MIT Press, 1991), 81.

67. See Ronald M. Dworkin, *Taking Rights Seriously* (Cambridge: Harvard University Press, 1977); Robert Nozick, *Anarchy, State, and Utopia* (New York: Basic Books, 1974); John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971); Michael Walzer, *Spheres of Justice: A Defense of Pluralism and Equality* (New York: Basic Books, 1983). For explicitly empirical work on justice, see *Justice: Views from the Social Sciences*, ed. Ronald Cohen (New York: Plenum Press, 1986); Norma Frohlich and Joe A. Oppenheimer, *Choosing Justice* (Berkeley: University of California Press, 1992); Karol Edward Soltan,"Empirical Studies of Distributive Justice." *Ethics* 92 (1982): 673-91; Soltan, *The Causal Theory of Justice* (Berkeley: University of California Press, 1987).

Rules versus Tradeoffs

Sartori and colleagues offer the most impressive synthesis to date on the vexed question of concept formation.[68] The primary effort of their research has been to uncover a set of rules—a method—by which to guide the process of concept formation in the social sciences.[69] Rules one and two in Sartori's handbook, for example, read as follows:

> **Rule 1**: Of any empirical concept always, and separately, check (a) whether it is ambiguous, that is, how the meaning relates to the term; and (b) whether it is vague, that is, how the meaning relates to the referent.
>
> **Rule 2a**: Always check (a) whether the key terms (the designator of the concept and the entailed terms) are defined; (b) whether the meaning declared by their definition is unambiguous; and (c) whether the declared meaning remains, throughout the argument, unchanged, (i.e., consistent).
>
> **Rule 2b**: Always check whether the key terms are used univocally and consistently in the declared meaning.[70]

This list extends to ten, and offers a convenient summary of what might be called the "rulebook" approach to concept formation, an approach that extends back to J. S. Mill.[71]

The most obvious difficulty with this set of rules is that they are at pains to rise above the commonsensical. (What allows us to determine whether 'ambiguity' or 'vagueness' is present in a definition?) More troubling is the frequency of Sartori's caveats—"awaiting contrary proof," "all other things being equal," and so forth.[72] These difficulties suggest that concept formation is a more dynamic and unpredictable process than can be managed within a recipe-like approach. (As one wag has noted, when is *ceteris* ever really *paribus*?)

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68. See Riggs, "Definition of Concepts," Sartori, "Concept Misformation," "Tower of Babble," "Guidelines"; *Social Science Concepts: A Systematic Analysis*, ed. Giovanni Sartori (Beverly Hills: Sage, 1984); *Tower of Babel*.

69. Reflecting upon the experiences of the Committee on Conceptual and Terminological Analysis (COCTA), which he chaired, Sartori ("Guidelines," 11) writes: "We all came to share the conviction that concept analysis required—in order to be of general and incremental value—a *method*" (emphasis added).

70. Sartori, "Guidelines," 63.

71. See Mill, *System of Logic*; Jevons, *Principles of Science*.

72. See, e.g., Sartori, "Guidelines," 53.

As we have seen, satisfying one criterion of conceptual adequacy is likely to have ramifications for other criteria. We can, for example, cleanse a term of a property which overlaps inconveniently with the definition of neighboring terms, so as to increase its level of differentiation. However, the more alterations we make within the ordinary understandings of a group of terms, the more tenuous their connection to established usage becomes, compromising their familiarity. The oft-noted instability of terms like ideology arises from the plural, and often contradictory, nature of the demands to which such concepts are expected to respond.

Moreover, since each element of a concept—the term, the intension, and the extension—is interdependent, there is no apparent place to begin (or end). Consequently, we cannot discern a common sequence to the process of concept formation. Some would begin with the word, some with the phenomenon, some with a theory, and so forth. In any case, the process of definition quickly becomes one of mutual adjustment. To achieve a higher degree of differentiation in a concept one may do one or all of three things: (a) choose a different term, (b) adjust the properties of the intension, or (c) adjust the members of the extension. Concept formation thus offers an excellent illustration of the so-called hermeneutic circle, since a change in any one aspect of a concept will normally affect the other two. For this reason, concept formation must be viewed holistically; there is no way to separate out tasks which pertain only to the 'phenomenal' realm from those that pertain only to 'linguistic' or 'theoretical' realms, as some approaches to the problem imply.

Acknowledging the interdependent nature of concept formation leads us away from the static, rule-bound model of concept formation. Forming concepts in the social sciences (as elsewhere) is a dynamic process, as suggested by the ubiquitous *ceteris paribus* clause. The best we can do in analyzing and guiding conceptualization is to keep track of the parameters. Tradeoffs, rather than rules, best make sense of this vexing enterprise. To be sure, the notion of concept formation as a set of trade-offs is not new. Over a century ago, Jevons pointed out that when the definitional attributes of a word are expanded (e.g., 'war' becomes 'foreign war'), its breadth is generally narrowed. (Otherwise put, more specific definitions generally refer to less phenomena.) Intension and extension are thus inversely correlated.[73] What has not been generally recognized is that the number of demands placed upon a single concept—and

73. See Jevons, *Principles of Science*, 26. This point was amplified by Sartori, "Concept Misformation," 1041. For other work highlighting the role of tradeoffs and internal contradictions in concept formation, see Cohen, *Developing Sociological Knowledge*, 131-45; Collier, "Putting Concepts to Work," Collier and Mahon, "Conceptual 'Stretching,'" Collier and Levitsky, "Democracy with Adjectives," and Andrew C. Gould, "Conflicting Imperatives and Concept Formation," unpublished manuscript (Notre Dame, IN: Department of Government, University of Notre Dame, 1998).

hence the number of possible trade-offs—reaches beyond two or three. A concept that is difficult to distinguish from surrounding terms, cannot be easily located in the physical world, shares few characteristics in common, is composed of apparently heterogeneous elements, covers only a small number of events, and does not build upon standard usage, is *for any one of these sins* less useful in the world of social science. It will not make sense, or will make less sense.

If concept formation is neither type-bound nor rule-bound, but is instead responsive to a large number of criterial demands, I would argue that we are better off thinking of social science concepts not as fixed entities in semantic space but rather as pragmatic, and often temporary, expedients. The process of concept formation owes more to art than to rote technique, involving one in an ongoing set of choices. Definitive definitions, good for all times and all situations, are rare. Recurring confusion in concept formation is not due to the limited methodological skills of the conceptualizer, but rather to the trade-offs entailed in conceptualization—a considerably more complex, multifaceted, and just plain messy process than Sartori's work suggests.

A *tradeoffs* approach to concept formation amounts to placing the *ceteris paribus* caveat at the center of our understanding. (To be sure, there are initial steps one takes to achieve what one might call Pareto optimality—a reconceptualization which enhances the performance of a concept on one dimension without impairing its performance on others. But once Pareto optimality is achieved, all further changes are costly. *Ceteris* is no longer *paribus*.)

Consider Geddes's choices in working out a definition for her key concept, "administrative reform." She defines this concept largely in terms of merit-based hiring for civil servants, a definition which she defends in the following way.

> This element of reform [merit-based hiring practices] was selected for emphasis because the many administrative reform packages that have been proposed during recent decades nearly always include it; rules for merit-based hiring, unlike other kinds of reform, vary only moderately from country to country; and the results of laws requiring recruitment by exam are relatively easy to assess. Meritocratic recruitment may not be the most important aspect of administrative reform, but it is always at least moderately important, and it is the easiest element of reform to 'measure' accurately.[74]

The concept of administrative reform, so defined, is reasonably coherent (it dovetails with connotations of 'reform,' for example) and differentiated (one

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74. Geddes, *Politicians' Dilemmas*, 104.

would not mistake it for some other concept). It is familiar, and it seems sufficiently parsimonious. Most important, Geddes manages to attain a high degree of differentiation. She has some doubts, however, about its theoretical utility (it "may not be the most important aspect of administrative reform"). No definitional choice, one imagines, would be perfect.

Towards a Relative Standard of Conceptual Adequacy

It would be easy to conclude from this example, and from the general discussion that preceded, that concept formation is mostly a 'contextual' affair. Contexts differ, to be sure, and the task of concept formation will vary considerably according to the specific real-world situation that one is attempting to describe, specific semantic fields (fields of neighboring concepts), specific etymological histories (the traditional social-scientific or ordinary-language understandings of the term), and specific analytic tasks. At the same time, it should be noted that in *all* contexts the conceptualizer will have to wrestle with the same eight demands. Concept formation thus retains a certain uniformity across the disciplines and subject matters that compose the social sciences.

Nor do we lack standards in differentiating good concepts from bad ones. I would argue, instead, that standards are assessable in terms of the goals achieved by a given concept *relative to that which the concept might otherwise attain with a different choice of words, properties, or phenomena.* It would be pointless, in other words, to complain that a certain definition of 'justice' was insufficiently differentiated because it was more difficult to locate in the empirical universe than a certain definition of 'chair.' The relevant standard of comparison here is other definitions of justice, or other neighboring terms which might more adequately identify the instances in question. As any new theory must prove itself superior to rival explanations, any new definition must vie against rival definitions and terms that might be employed in that particular empirical and theoretical context. Thus, in the case of Geddes's concept of administrative reform, the test of adequacy may be operationalized in the following question: is there a term, or another set of attributes, which would better fulfill the eight tasks of concept formation in this research design? If the answer is yes, then Geddes may be faulted; if no, then her concept stands.

This process of concept evaluation would be aided if all writers were as frank in setting forth the pros and cons of their own terms as Geddes has been. Indeed, such transparency should be considered on par with norms of openness in other facets of research—e.g., in making data available to other scholars, in making clear possible biases in the data, and so forth. Writers have an obligation to state explicitly why (on the basis of which criteria) certain properties and terms were chosen, or excluded. In the case of neologism, it should

be incumbent upon the writer to demonstrate that *no* suitable terms can be found in the existing lexicon, a much harder case. In this way, it would be easier for readers to visualize alternative formulations of a given concept, and thereby judge the adequacy of the writer's proffered solutions.

In any case—for the reader and the researcher—approaching the task of concept formation in the social sciences from an integrated framework reduces the uncertainty of this process, specifying the various demands that must be taken into consideration and, in so doing, allows us to make better choices. Where concepts remain flawed—as, in a certain sense, all social concepts are—we may at least profit from this framework in better understanding the nature of those flaws. "When it is impossible to obtain good tools," writes Mill, "the next best thing is to understand thoroughly the defects of those we have."[75]

Discussion

To many writers, the semantic confusion besetting the social sciences (as described in the opening section of this paper) is not a signal to clean house, but rather a signal that we ought to investigate the sources of these inner linguistic tensions. Overlapping definitions, internal contradictions between definitional properties, and imprecise operationalizations (to name only a few of the most common sins) are, in this view, (a) natural to ordinary language, (b) ineradicable from social-science discourse, and perhaps (c) desirable. To such writers the present study no doubt exudes a strong and unpleasant odor of 'positivism,' since I am proposing that there is a uniform set of criteria guiding concept formation within the social sciences, and that among such criteria are norms of operationalizability and classificatory utility. Indeed, even to invoke the notion of social science is to suggest the applicability of a natural-scientific model of endeavor. Since this is not really what I am proposing, it seems worthwhile to explore some of the broader epistemological questions that lie behind the claims of the present study.

With the first of the foregoing propositions (that many of our conceptual failures are normal to ordinary language) I am in wholehearted agreement. The second proposition, however, is more problematic. Before proceeding further, I should emphasize what should already be apparent: I am not, in the fashion of classical logic, proposing the creation of a taxonomic social science language in which "the meaning of a term [is] fixed by laying down a set of necessary and sufficient conditions for its application," and in which each term would be distinguished from neighboring terms by one defining attrib-

75. Mill, *System of Logic*, 31-32.

ute, such that all concepts could be arrayed on a single hierarchical grid.[76] This would require agreeing upon standard definitions and enforcing them—a formidable task, one imagines, and not one necessarily productive of good social science work. Whether even the *natural* sciences actually operate in this fashion may be debated.[77] In any case, the objects of research in the social sciences refuse to lie still in the manner of rocks, animals, cells, and atoms. If the social sciences are scientific at all—and this, of course, hinges upon how one chooses to define science—they are surely scientific in a very different way than the natural sciences.

Yet, the unworkability of logical positivism should not obscure the fact that there is still a great deal separating the language of social science from natural language—as codified, let us say, in dictionaries of standard usage. One may approach the specialness of social science as a matter of methods and of objects of study; it is also, I would argue, a matter of concepts. Like natural scientists, Mennonites, Republicans—like virtually any sub-group of the general population—social scientists use specialized terms and definitions (often specific to a field or subfield) and, conjointly, a specialized set of criteria to guide the process of concept formation. We can debate the extent of this specialness, asking to what degree a technical/professional vocabulary may be justified. Indeed, from a broad epistemological angle, this is what the present study seeks to establish: under what circumstances, and for what reasons, social science should deviate from norms of ordinary usage.

76. Kaplan, *Logic of Inquiry*, 68. See also Jevons, *Principles of Science*, 73; Riggs, "Definition of Concepts."

77. See, e.g., Bruno Latour and Steve Woolgar, *Laboratory Life: The Social Construction of Scientific Facts* (Beverly Hills: Sage Publications, 1979).