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## Critical Examinations of the Known and the Unknown in Social Science: Where Do We Go from Here?

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### Abstract

If the use of social science assumptions and beliefs is what helped set fields of professional practice on the quest for recognition in the academy, what does the recent outpouring of publications on the limits of science reveal about sociocultural research prospects at the dawn of the 21st century? The last few years alone have witnessed the publication of special journal issues on the "scientific wars" of the nineties, year long professional association debates on "the known and unknown," and new books and online data sources proclaiming "the end of social science." Cumulatively, research and commentary on the limits of science offer pessimistic and optimistic arguments about advances in understanding intractable sociocultural problems that center on understanding extraordinary complexity. We come down on the optimistic side, encouraged by possibilities for using heuristic tools to identify propositions and ideologies presented across a variety of interpretive texts written to accomplish the function of expressing interpretations on the known and unknown in sociocultural research.

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qualitative research

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# **Critical Examinations of the Known and the Unknown in Social Science: Where Do We Go from Here?**

by  
**Cynthia Wallat and Carolyn L. Piazza<sup>±</sup>**

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## **Abstract**

If the use of social science assumptions and beliefs is what helped set fields of professional practice on the quest for recognition in the academy, what does the recent outpouring of publications on the limits of science reveal about sociocultural research prospects at the dawn of the 21<sup>st</sup> century? The last few years alone have witnessed the publication of special journal issues on the "scientific wars" of the nineties, year long professional association debates on "the known and unknown," and new books and online data sources proclaiming "the end of social science." Cumulatively, research and commentary on the limits of science offer pessimistic and optimistic arguments about advances in understanding intractable sociocultural problems that center on understanding extraordinary complexity. We come down on the optimistic side, encouraged by possibilities for using heuristic tools to identify propositions and ideologies presented across a variety of interpretive texts written to accomplish the function of expressing interpretations on the known and unknown in sociocultural research.

## **Introduction**

With the recent burgeoning of technology, particularly hypertext and hypermedia use across all levels of education, there appears to be a blurring of lines between what is known (a body of facts), what is knowable (that which is discovered or invented) and what is unknown (what remains hidden due to the complexity of human - social problems). The paper offers applications of several heuristic schemes suggested in qualitative research to reconcile the known and unknown into meaningful connections that recognize the dual function of representing information (propositions) and expressing interpretations about that information (ideologies). As a point of departure, two, a priori assumptions must be considered: the need to validate new genres of social science texts by illuminating the limits and possibilities in any particular genre, and the understanding that the nature of this *Information Age* presents unprecedented challenges for the next generation of researchers regarding how to navigate complex information spaces in order to explore propositions and ideologies about the known and unknown across social sciences.

Perhaps Gilster's ([1997](#)) description of literacy as "knowledge assembly" is one of the most dramatic metaphors ever to draw attention to how the variable modes of discourse available through traditional print formats and hypertext affect the boundaries of what is known. The notion of permeable boundaries in traditional academic writing has been discussed for many

years as a possibility (Bernard-Donals, [1998](#), p. 249), while the Internet is being pursued for its abundant offerings of new rhetorical tools in which individuals literally chart their own path through vast pools of information, gathering and deleting ideas as they go. Given the increasing number of electronic journals, both traditional academic writing and hypertext that is heralded as designed especially for the Net, the World Wide Web is portrayed as the field site for the study of myriad uses of rhetoric and the assessment of distinguishing between content and its presentation (Gilster, [1997](#), pp. 2-3).

Knowledge assembly is all about constructing a perspective and it happens with individuals growing ability to engage in the process of knowledge building through linking to information in multiple formats from a wide range of sources. Since the World Wide Web, or Net, is open to global contributions by all who have the tools of electronic publishing, examinations of the known and unknown demands a comprehensive and necessarily analytical approach to social science information.

At issue is what modifications and additions may be needed in the concept of "knowledge" to encompass the phenomena observed in settings where people and computers meet in communities built out of language and negotiate what counts as knowledge (e.g., Turkle, [1995](#)), and what units of analysis will be most helpful to comprehend 21<sup>st</sup> century sociocultural phenomena. That question lies at the heart of the "science wars."

## **The Science Wars**

Science editors in both popular and academic journals have adopted the term "science wars" to refer to the sides being taken on debates about the reliability and objectivity of science as well as the scope and authority of science (*The Economist*, [1997](#)). These issues go to the heart of the science enterprise. They raise the question of how scientists produce knowledge. "The critics of science say that the practice of science - the questions it asks, the way it interprets data, even what counts as data - is subject to the political cultural and social influences of the times.... To many scientists those are fighting words" (Begley, [1997](#), p. 54).

The combatants are those taking sides on challenges to the very basis of science: its objectivity, its rationality; its inherent reliability in extracting nature's secrets, and its cognitive credentials in creating knowledge and descriptions of the real world (*The Economist*, [1997](#)). The present debate - or science wars - about the scope of the known, and authority over what is both known and unknown, means that both sides have real concerns.

Scientists worry about the public understanding of science, about .... The chilling effect of political correctness on disputed lines of social research. [Science critics] in their turn are concerned about the arrogance of science, about its imperial over-reach, about a depressingly widespread and crude scientism that treats all [social science]... not just cultural studies... as essentially subjective and unsound. (*The Economist*, [1997](#), p. 77)

*The Economist* editorialized recently that knowledge has become so balkanized that the public should no longer expect certainty from science. "The old idealized histories, which often represent science as a steady and inevitable march of ideas, have been replaced by more

illuminating accounts of the toil, dispute and wrong turns in extracting nature's secrets" (1997, p. 77). The implication of such observations is that idealized descriptions of the properties of the search for the known and unknown are under attack. These observations bring further attention to the investigation of forms (materials) and practices (discourses) surrounding what is proposed as the contents of knowledge (Gilster, 1997; Swidler & Ardit, 1994). Forms of knowledge theory must shift to a comparative framework which can account for: (a) the history of variations in forms for expressing ways of seeing, believing and interpreting social phenomena and experiences, (b) the possible effects of the explosive growth of personal computers on legitimating new modes of discourse, and (c) the growing number of collections of observations of individuals' knowledge assembly ability (i.e., creating meaning) including their blurring of traditional divisions of thought as abstract propositions or contextual beliefs about concrete life experiences (Turkle, 1995, pp. 54-57).

## Perspective

This paper uses the current critical climate about the limits of science as its starting point and explores both propositions and ideologies about the possibilities of social science as we enter the 21<sup>st</sup> century. We suggest some resources researchers can draw on to identify abstractions (propositions) and beliefs (ideologies) into networks of relationships that sustain the search for knowledge. This is the arena of praxis, in which social scientists and professional practitioners propose values and knowledge claims to address the contention that there are both opportunities and limits to developing sociocultural knowledge (cf., Lindlof, 1995; Popkewitz, 1991; Thompson, 1990). Our selection and compilation of assertions regarding the nature of social problems, and persuasions about what social problems should be considered important, is based upon our review of the content and product foci of several sources: interviews of social science scholars on "The end of social science" (Horgan, 1996a); contributions to the Sloan Foundation sponsored project for a year long publication series in the *Anthropology Newsletter* on the topic of "The limits of scientific knowledge" (Skomal, 1996, 1997); and chapters included in the American Anthropological Association project on "Problems, issues, and decisions in teaching social and cultural knowledge" (Kottak, White, Furlow, & Rice, 1997).

The framework that we used for compiling assertions (propositions) and persuasions (ideologies) was suggested by John Horgan in his report of interviews with scholars "who were butting their heads against the limits of knowledge" in anthropology, history, linguistics, philosophy, and sociology (Horgan, 1996b, p. 4). Horgan, who has been a writer for *Scientific American* for many years, found that social scientists and sponsors of social science research in foundations agree that advances and new directions depend upon scholars attending to three prerequisites: (a) paying attention to illuminating ways to address complex phenomena, (b) paying attention to developing ways to keep expanding the base of axioms, and (c) paying attention to how the US educational system can counter its traditions of ignoring what is unknown or maybe unknowable and thereby presenting "such a seamless, noncontradictory view of reality" (Horgan, 1996, p. 229).

Our special concern is considering proposals (propositions) and persuasions (ideologies) about the possibility of knowledge assembly on intractable problems that center on sociocultural systems of extraordinary complexity. We consider the prerequisites presented above by

illustrating a means of critically examining the rhetorical tools of abstractions and persuasions across a yearlong set of essays on the subject of the known and unknown in anthropology. To this end, we propose a heuristic scheme that uses essential properties of language as a means for identification and interpretation of propositions and ideologies while keeping in mind three a priori assumptions. The first assumption is that scientific writing is not a single fixed form of communication but a set of operations that writers use to construct a representation of events, objects, or actions. This paper presents the intellectual issues that animate the practice of considering the nature of human language using referential information across a variety of written texts, each with their own limits and possibilities for persuading others about what knowledge is of most worth.

Text variability, consisting of choices writers make to fill out relationships between content, form, functions, and social contexts, poses its own challenges regarding what is knowable. Text genre conventions and discipline-specific knowledge are likely to be inherently confounded by the complexity of the problems investigated. A second assumption, therefore, has to do with the understanding that social scientists will be faced with intractable problems that will determine what is known and unknown. We will include an illustration of what is meant by intractable problems as they exist in one knowledge producing community (i.e., the American Anthropology Association). Several compilations of assertions located in the variety of discourses produced by members of this community to address the known and unknown in social science research and problems, issues, and decisions in teaching about complex sociocultural systems and intractable social problems are presented.

The final assumption deals with the practical aspects of using a heuristic scheme for analyzing ideologies given the expectation that the 21<sup>st</sup> century requires a learning orientation such as "consider that you will be reading millions of sentences that you never read before" (cf., Chomsky interview in Young, [1994](#)). Uncovering new knowledge will require that individuals not only analyze information using long established techniques for knowledge representation such as indexing, classification, and other aspects of the meaning and structure of words, but be able to discern the generally implicit feature of both academic texts and hypertext which is expressing their authors' position (i.e., ideologies) across information spaces. The last section of the paper is therefore devoted to reporting illustrations of applying the heuristic scheme for analysis of ideologies in the same sample of articles presented in the exploration of knowledge propositions presented earlier.

## **Sociolinguistic Research: A Heuristic Scheme To Reconcile The Known And Unknown**

When societies of humans confront ideas and realities that are profoundly moving or disturbing, they do something uniquely and essentially human: they create culture around them - myth, religion, art and eventually science. By such means what feels chaotic and beyond control is reduced to the lawful and the understood. And around language all these explainers have flourished, as culture after culture has sought ways to make sense of [their contexts]. (Lakoff, [1990](#), p. 13)

Those who must read and write to get work done - academics, business people, civil servants (bureaucrats), lawyers, newspaper reporters, physicians, teachers, social workers, students, and so on - face what the linguist Robin Lakoff (1990) calls "Two faces of language:" that public discourse messages can serve the dual functions of representing information and expressing one's position about that content. Her identification and discussion of essential properties of language as well as the above passage from her introduction to the notion that humans "are always involved in persuasion, in trying to get others to see the world or some piece of it in [their] way" (Lakoff, 1990, p. 18), proffers several constructs we use in this paper as a method for identifying two sides of every social science story (the known and the unknown). These constructs include language functions, language resources, and language interpretations.

Lakoff extends the work of other researchers who consider prevailing views on the communication of social science knowledge. Similar to Agger (1990), Levine (1995), Nash (1990b), Popkewitz (2000) and Shavelson and Webb (1995), Lakoff argues that the continued use of negative connotations of terms such as ambiguous, complexity, and convoluted to discuss modes of academic writing obscure the functional diversity of the part played by language inside and outside of the academy. Readers often see vagueness and indirectness as literal: they attribute the work of academic writing to lack of concern with the "real" world or to indecisiveness or hesitancy (Carter, 1990; Lakoff, 1990, pp. 38, 158). In other words attributes of writers are foregrounded while the plausability of writing as an indicator of political or cultural change is marginalized or hidden. What remains unnoticed or unmarked in reviews of presentations of what is known and unknown is social scientists' multifunctional attempts to fulfill the centuries old goal of accomplishing a "dialectical processing of objective fact and subjective evaluation" (Nash, 1990a, p. 10). The personal overshadows the language devices writers use as resources to evaluate and criticize "the information and the propositions he or she tries to set down as fully, accurately, and objectively as possible" (Nash, 1990a, p. 10).

Lakoff argues the need to attend to properties of language that make it possible to accomplish functional diversity and to discontinue perpetuating dichotomies of genres as "simplify" and "complex." She further urges researchers to discontinue drawing lines between legitimate and illegitimate persuasive techniques across written texts. Such distinctions, "based on the personal preferences of the definer, [are] not valid. ... We all have some persuasive skills" (Lakoff, 1990, p. 16). They can be found across discourses such as genre or text.

Lakoff's goal is to expose the false dichotomy between style and substance by helping individuals become more explicitly aware of the analysis and syntheses abilities we all have and employ as techniques for using discourses as variable resources to formulate expressions of our beliefs. Applied to examinations of social science knowns and unknowns, Lakoff's goal is adopted in this article to acknowledge calls for creating critical frameworks on visual and written social representations of the sociocultural environment and social practices (e.g., Brown, 1995; Dougherty, 1985; Duveen & Lloyd, 1990; Chartier, 1995; Thompson, 1990; Tufte, 1997; von Cranach, Doise, & Muguy, 1992).

In the remaining parts of this section the reader will find an account of Lakoff's explication of three essential properties of language, or, the "Triangle of Linguistic Structure." This image of language as a triangle of form, content, and meaning encompasses several notions about the

characteristics of language we think are important for considering any proposal for exploring what is known and unknown. These concepts include: *language functions* (e.g., the variety of representations of what is believed to be known and unknown about social phenomena), *language resources* (e.g., the variety of genre conventions or text features individuals create, modify, and suspend to communicate their positions and ideas as they attempt to take into account the preferences audiences of written text also create, modify, and suspend depending upon their own contexts), and *language interpretations* (e.g., multiple ways that individuals use language functions and resources to create meaning and influence what is considered legitimate academic, business, bureaucratic, legal, news reporting, medical, schooling and other social service work). As demonstrated in our earlier work on the language of policy and evaluation (Wallat & Piazza, [1991](#), [1997](#)), writers engaged in critical examinations of social science may selectively employ these characteristics of language as well as selectively emphasize the essential properties of language to communicate what is known and unknown.

*Language Functions.* First of all, in constituting her interpretation of the essential properties of language and her explanation that all language is political, Lakoff illustrates use of the function of language called ideational and representational. The primary function of representation is communication of content through expression of propositions (Halliday, [1973](#)).

Research has identified important aspects of the function and use of representations in day-to-day life. For individuals these aspects include: (1) attainment of ability to imagine the many concrete and abstract possibilities inherent in any one situation, including the situation of writing a text as well as the complex situations and phenomena referred to in a text, (2) attainment of the increased ability to formulate, to reason, and to code through specialized languages the ever more numerous bits of information available at work and school (Ashton, [1975](#); Agar & Hobbs, [1985](#)).

The second point we want to highlight was suggested in the beginning of this section of the paper with the inclusion of the social representations of language as "two faces of language" and "the triangle of linguistic structure." The use of representations such as the former are a challenge to all readers who are considering any text as a possible source of information about what is known and unknown about a phenomena in society. A representational phrase such as "intractable problems that center on systems of extraordinary complexity" is obtuse. Its possible meaning is arbitrary - or what Halliday calls multifunctional. However, viewed as a social proposition, readers can use the multifunctional attribute of language as a resource to identify inferences about the author's point of view on what is known and unknown about phenomenon represented as intractable problems, or systems of complexity, or even the triangle of linguistic structure. Such inferences can be drawn if you employ tools or technologies such as the propositional schema presented in [Appendix A](#) to delimit your task to finding what you think the author proposes are properties, comparative attributes and contingency attributes of a social phenomena including complex problems. Such a heuristic can even be applied to Lakoff's representation of language. For example communicating the words "triangle" and "language" suggests there may be *properties* of language which enhance its function in shaping meaning, and / or that language forms have *comparative attributes* such that meaning is created by combining form and function, and / or that there are many types of *contingent attributes* linking

language and understandings of complex problems such as variation in the ways propositions can be stated or visually presented along a continuum of directness and indirectness.

*Language Resources.* To see what is at stake in interpretation and analysis (i.e., the ability to find proposed solutions to hard problems or to factor complex problems into solvable pieces) Gee (1990) and many others (e.g., Atkinson, 1993; de Castell, 1990; Golden & Pappas, 1990; Goldman, 1997; Hymes, 1974; Lemke, 1988; Nash, 1990; Perfetti, 1997), advise all of us living in the *Information Age* to become familiar with a variety of perspectives on language and society, including what is known and unknown about the multitude of resources individuals have to express themselves as they utilize variation in form, content and style (i.e., genres). (Note: See deCastell, 1990; Goldman, 1997; Wallat & Piazza, 1991, for summaries of definitions and issues surrounding a variety of genres including essays, interviews, policy and research documents).

Examining both resources and functions, Halliday (1973) points out that different uses of language in society may be seen as realizing different intentions. For example as individuals use language as a means of getting things done, they are using language as an instrumental resource. Conveying or discerning a message that has reference to processes, persons, objects, abstractions, qualities, states and relations of phenomenon in the real world is the utilization of the representation function of language. "Language is, in addition to all its other guises, a means of communicating about something, of expressing propositions" (Halliday, 1973, p. 16).

*Language interpretation.* The representation of knowledge (what is known, knowable, or unknown) and the interconnectedness between expressions of knowledge has been a continued problem in social science. Halliday's explorations in creating a perspective for considering knowledge representations as expressing propositions is part of a long tradition in social science reaching back many centuries. One of the first attempts to provide a systemic tool and framework to represent and detail what makes interpretations of something offered for consideration possible is generally attributed to Aristotle. He explicated the notion of propositions in his thesis called "On Interpretation." One purpose of his notion of proposition was to identify the language signs of something proposed to be believed, doubted, denied, or considered true or false. Aristotle warned his readers that explicit identification of a proposition through reference to conventions such as noun, verb, and sentence was problematic. Given the multiple functions grammatical signs can serve, he recommended defining propositions in terms of functions such as affirmation, denial, and contradictions (Edghill, 1998).

More recently, qualitative researchers such as Maxwell (1996) and Agger (1990) have recommended considering propositions in terms of analyzing explanations or proposed ideas about what is going on when individuals and groups take on the study of intractable problems. Such recommendations are related to propositions such as: the current state of the social world is a "parallax of discourse" (Denzin, 1997, p. 46), validating interpretative studies is an "unknown" (Siegel, 1996, p. 6), and, inclusion of personal opinion in social science writing remains an unresolved issue.

## **Validating New Genres Of Social Science**

As the 20<sup>st</sup> century moved toward its last decade, George Johnson, a science editor of the *New York Times*, asserted "what we learn about the scientists illuminates the science (Johnson, [1989](#), Section 7, p.1). In an essay called "Two sides to every science story," Johnson provided examples of insights that could be ascertained from inclusions of behind the scenes descriptions of work styles and personal stories of quests to uncover new knowledge.

There are two ways of writing about science. A writer can focus on the science, as though it were received wisdom, like a Coke bottle that fell from the sky, or on the scientists, laying bare the emotions and drives that are part of the haphazard process of discovery. ... The very different ways that [researchers choose] to describe their triumphs says a lot about the difficult job of writing about science.... Do you hew to the straight and narrow relying on some well - chosen metaphors ... to carry readers through the thicket of abstractions? Or do you swing the other way and write an unabashed confessional [to] show the personal side of science? (Johnson, [1989](#): Section 7, 1)

This passage captures Johnson's belief that making visible the problems encountered in research would be valuable to science writers and science audiences. His philosophy of science can be summarized in a few propositions. Primary among these is that all science discipline areas contain an agenda of unresolved problems. The interplay between processes of invention and discovery and products such as a body of facts can make for great science and great drama. Just as there are variable styles of science writing, there are variable styles of doing science.

For example when Ben Agger posited the question, "Can academic writing be done differently?" ([1990](#), p. 140) he admitted his belief that academic writing is purposely obscurantist. Yet his ideology about the possibility of change in academic genres was set out positively. Social science can be "reinvented by writers unafraid to bridge the social sciences and humanities in order to plumb the social world for its deepest meanings and structures." (Agger, [1990](#), p. 3) Attention to the identification and definition of components of the form, technique, and content of a range of written works (i.e., genres) has demonstrated that we can say more than "academic writing is the writing done by academics." (Agger, [1990](#), p.137).

In presenting his side of the story, Agger includes a description of the venue for accomplishing variable styles of expression in the social science. That nothing is simple today is all the more reason that theorists

must write straight ahead through the thickets of confusion and complexity confronting any responsible social analyst; this confusion and complexity *can be simplified*, even [though] there are no one - on - one principles of translation or semiotization according to which we can replace a complex concept with a simpler, terser one. The responsibility for writing public discourse is more a matter of temperament and style than a methodological injunction to craft brief sentences. ...The principle of public discourse involves a commitment to *political education*, the systematic consciousness raising that allows the disempowered to learn and use complex languages and thus to challenge power. (Agger, [1990](#), p. 199)

Agger ends with his positive message: A research agenda of critical cultural studies can be formulated. Social science has the opportunity to broaden "communicative competence as well

as [social-cultural] imagination far beyond its current academic ranks" (Agger, [1990](#), p. 214). Social analysis and diagnosis of what is known and unknown about the public sphere can proceed with some reliance on abstract and technical categories and concepts. "This is a delicate balance: On the one hand we must use abstract concepts to understand the mammoth structuring forces ... constituting our lives. On the other hand, we must avoid ... robbing critical categories of their diagnostic ability, lest they cease to any useful analytical work." (Agger, [1990](#), p. 215). Agger casts the idea of creating and sustaining this fundamental balance in his call for theorists to recognize that they write the texts of ideology and ontology. "It is precisely for that reason that I call for critical writers to develop a public voice with which to enter into dialogue with those convinced that the present social order is inherently intractable" (Agger, [1990](#), p. 216). Writers of this side of the social science story will not be limited by composing themselves in ways accessible to a limited audience. Critical writers will not shrink from the difficulty of thinking about the utility of abstraction but will labor in the process of educating others about its categories, technical apparatus, and conceptual possibilities and limitations. "Ideology does not fall from the story ... Even to recognize this is a step in the right direction ... Of course, recognizing is not enough. We must reauthor the public world, not just theorize about what is going wrong" (Agger, [1990](#), p. 218).

Our interpretation of such calls for continuing the difficult work of sorting out what accounts for sociocultural phenomena is presented in the remainder of this paper. The product (outcomes and findings) foci of new genres of social science that address the development of new images of variation and diversity are yet to be written. Some of what is unknown includes methods of validating analyses of propositions and ideologies. However, it is possible to conduct critical examinations of individuals' and groups' current attempts to sort out the known and unknown in sociocultural research. Applications of propositional and ideological analysis methods illuminate advances in social sciences.

## **Constructing and Shaping Objects Of Knowledge by Analyzing Propositions and Ideologies**

Are disciplines grappling with questions of their limitations? Are disciplines dealing with the issue of diminishing returns and retractable problems? It was social scientists willingness to address such questions posed by observers of the science wars of the late 20<sup>st</sup> century that caught the interest of the Sloan Foundation (Skomal, [1996](#), [1997](#)). The result was support to the American Anthropology Association for the writing and publication of a series of essays on the theme "The known, knowable, and unknowable." The series of essays were published in the monthly *Anthropology Newsletter* (AN) during 1996-1997 (Vol. 37, No.1-9; Vol. 38, No. 1-6).

In this paper we examine a set of expert judgments included in the series of essays on levels of existing sociocultural knowledge and target areas to examine further sociocultural processes in 21<sup>st</sup> century social science research. While a set of papers published for a year long series on the known and unknown may be considered constrained in scope, the essays are representative of several decades of effort in Anthropology to identify understandings of the concept of culture and the use of social science knowledge in the analysis of policy problems and public negotiation (cf., Sanday, [1976](#); Wallat, [1995](#)).

Discursive practices are used by members of a profession to shape events in the domains subject to their professional scrutiny. The shaping process creates the objects of knowledge that become the insignia of a profession's craft: the theories, artifacts, and bodies of knowledge that distinguish it from other professions. Analysis of the methods used by members of a [knowledge producing] community to build and contest the events that structure their lifeworld contributes to the development of a practice - based theory of knowledge and action. (Goodwin, [1994](#), p. 606)

In our analysis, we examine three practices of professional activity outlined in Goodwin's ([1994](#)) article called *Professional Vision*: (1) producing documents on the contribution of fields of research to building a foundation for development of public policy based on expert judgment about contemporary sociocultural processes (i.e., what is known), (2) providing dissemination of these documents to provide a systematic framework within which social science researchers can pursue work that funding agencies may consider applicable in the demand for "relevant" activities which promise some practical benefit in areas such as child and youth development, community development, and education both in and out of school (i.e., what is knowable), and (3) developing and highlighting representations that well known members of the profession assert can be marked in some fashion as specific phenomena in the complex world as objects of knowledge. While generalizations based on these representations are currently unknown, phenomena can be constructed and transformed into specific objects of knowledge known as codes in order to shape observations of complexity as answerable and understandable in the future (i.e., what is arguably knowable). (cf., Levine, [1985](#); Popkewitz, [2000](#); Sanday, [1976](#); St. Pierre, [2000](#); Wallat & Piazza, [1991](#), [1997](#)).

In following the strategy set out by Thompson ([1990](#)) in his book *Ideology and Modern Culture*, we engage in three procedures, which provide a means of seeing symbolic forms in a new light. Following Thompson ([1990](#)), the purpose of our review of social scientists' visions on what is known and unknown about sociocultural processes is to consider the significance of the *Information Age's* extended production and circulation of symbolic forms - of linguistic expressions, words, actions - in terms of possible contributions to rethinking the concept of ideology. Thompson's central aims in his book, *Ideology and Modern Culture*, are similar to the Anthropology Association's purpose of preparing for the 21<sup>st</sup> century by identifying members positions on what is known and unknown.

In examining the Anthropology Association series of research essays concerning sociocultural processes in terms of ideology our interest is opening new paths for interpretation and critique of the persuasive grounds and the modes used in knowledge producing communities. Our intent is to build a foundation for expanding our study of language and policy to include the analysis of persuasive devices across variable modes - or genres - to bring to light how ideology is part and parcel of discursive practices. The first step we completed in the analysis of the American Anthropology contributions was to identify the contributors' persuasions on what is known. For example all of the contributors brought forward the idea that it is possible to study culture in new ways. Alternatives have been proposed and accepted for consideration of knowledge of culture as more than descriptions of a self-enclosed or autonomous set of beliefs, norms, frames of reference, and so forth. Sociocultural analysts consider what is known about culture in terms of new categories, codes, or objects through which forms and changes in the social world can be bracketed, reconceptualizations of the social world can be recognized, and new prospects for

future knowledge producing projects can be charted. This step in our analysis was straightforward since the format of all of the essays highlighted subsections on the known and unknown.

Table 1 includes our compilation of contributors' descriptions of what is known and knowable. The compilation includes summaries of contributors' statements about categories of knowing and their statements about how the analytical difficulties of attending to such sociocultural categories can be handled. The themes in Table 1 index social scientists' assumptions and beliefs on what helps fields of practice to establish recognition in the academy (subject areas) as well as what helps develop prospects to deal with intractable problems that center on systems of extraordinary complexity (knowledge areas).

<b>Table 1: Theme Display</b>	
<b>Establish Recognition [Subject Areas]</b>	<b>Develop Prospects [Knowledge Areas]</b>
<p>Sociocultural contexts: The sociocultural contexts of uses and meanings of language</p> <p>AN October, 1996 Siegel, <a href="#">1996</a></p>	<p>Focus on forms of community as: the dynamic interplay among external and internal forces for understanding how local groups are constituted</p> <p>Focus on the functions and use of constructs used to develop explanations and understandings of the idea of communities: how local groups are constituted; the diversity of tactics both individuals and groups employ in confronting learned values, rules or norms</p>
<p>Cultural ecology: The social organization or content of beliefs</p> <p>AN October, 1996 Siegel, <a href="#">1996</a></p>	<p>Develop the concept of ideational culture, that ideas and meanings attributable to any culture can be characterized as a continual flow of information (openness), partly because individuals in them are variously exposed to what they know</p>
<p>Systems perspective: Viewing a culture as a complex system</p> <p>AN November, 1996 Fessler, <a href="#">1996</a></p>	<p>Identification of additional analytical levels that can be added to the study of domains such as emotion, i.e., how knowledge of different analytical levels can be linked</p> <p>Portraits of a given cultural system may be developed using the notion of shifting levels of analysis up and down</p>
<p>Development of social stratification and</p>	<p>Highlight products of multilineal progression</p>

<p>social order can be linked as products of multilineal progression where features change over time</p> <p>AN November, 1996 Fessler, <a href="#">1996</a></p>	<p>including features such as technological, social structural and theological, and psychological</p> <p>Explore the possibility that cultural systems such as the domain of emotion is part of the different politico - economic forms of social stratification and social order</p> <p>Explicate diachronic perspectives i.e., historical analyses, to consider "same level, different time:"</p>
<p>Human development: Forms of knowledge</p> <p>AN December, 1996 Shweder, <a href="#">1996</a></p>	<p>Attend to developing the pluralistic way that anthropology actually gets done, i.e., the imaginative processes of humankind --- the filling in of a huge discretionary space between the evidence of the senses and forms of what people believe, value and do</p>
<p>Human Language: Differentiation</p> <p>AN January, 1997 Hill, <a href="#">1997</a></p>	<p>Develop accounts that address the meanings of linguistic diversity</p>
<p>Human Language, cont'd: The range of semiotic materials that can be recruited to constitute particular cultural systems of differences</p> <p>AN January, 1997 Hill, <a href="#">1997</a></p>	<p>Identifying explanations of how semiotic materials constitute systems of differences involves addressing: How and why did linguistic diversity develop? What is it good for? Is it part of an indefinitely large range of semiotic material that can be recruited to constitute particularity in cultural systems?</p>
<p>Representations of culture as problematic i.e., link problems of knowing and forms of knowing</p> <p>AN February, 1997 Urban, <a href="#">1997</a></p>	<p>Create new formulations of culture based upon addressing questions formulated about the process of interconversion, i.e. What is the relationship between culture that is out there and culture that is a representation of what is out there?</p>
<p>Problems of knowing: What kinds of discourse --- and more generally --- what kinds of cultural forms --- circulate more readily? Which ones die out?</p>	<p>In what measure does discourse circulate in and across complex systems because of its experienceable qualities? In what measure does it circulate because of its semantic message?</p>

<p>Forms of knowing: Empirical investigations of the experienceable qualities of discourse</p> <p>AN February, 1997 Urban, <a href="#">1997</a></p>	
<p>Communicative Competence: Scenes that compose the life world of society</p> <p>Explorations of these scenes focus on: patterns of interaction within culturally specific settings as well as culturally specific understandings about how to think, feel, know, and act in concert with others</p> <p>AN April, 1997 Goodwin, <a href="#">1997</a></p>	<p>Build upon cross cultural explorations of communicative competence that have identified the following particularities: European - American middle class mothers organize their communication with infants through dyadic exchanges; Ethnic societies within Western Samoans, New Guinea, Java, and the U.S. organize language development competence without having talk directed explicitly at children; Some societies do not consider infants and young children intentional beings and do not initially treat them as conversational partners; Other societies characterize mother / child interaction as the socialization of parents by children through vocalizations, looks and gestures</p>
<p>Define epistemic communities --- e.g., concepts such as knowledge producing communities and intentional communities of knowledge point out that relationships between structural location and knowledge is complex</p> <p>AN May, 1997 Morgen, <a href="#">1997</a></p>	<p>Development and constitution of a more multivocal anthropology occurs through: paying attention to institutional practices that expand the borders of a knowledge area; paying attention to epistemological questions, including: how does a problem get noticed and defined as worthy of study? how does one know what one "knows?" how do key dimensions of social location --- including gender, ethnicity, and class --- shape what is known and the processes of knowing production?</p>

The Table 1 compilation of the authors' presentations of their interpretation of the subject matter of contemporary sociocultural processes served as the base of a second step in our analysis. The authors cited in Table 1 were asked to address their particular subject areas for the AN year long project. The insights of this group of scholars on intractable subjects that centers on systems of extraordinary complexity had a number of commonalties: (a) recognition and acceptance of the study of human kind as problematic and ambiguous, (b) demonstration that dealing with problems and ambiguity is the constant which provides the study of humankind its continuing energy and expanding audience. In our second step, we addressed the possibilities about how such common assertions about subject areas and knowledge areas provide theoretical groundwork in social science. We began the construction of Table 2 by relisting the subject and knowledge areas highlighted by contributors across the year long AN series. Table 2 is presented

as an illustration of the use of a systematic framework within which other researchers can pursue work in dispensing untenable assumptions - or propositions - surrounding the concepts sociocultural experts identify as important (i.e., what is known and unknown). [Appendix A](#) is the schemata that we used as a pragmatic device to choose theoretical assertions included in the content of the essays and commentaries. As displayed in Table 2, our commitments to communicating interdisciplinary research and combining quantitative and qualitative perspectives determined the selection of descriptive propositions from three groups of proposition attributes (property attributes, comparison attributes, and contingency attributes).

**Table 2:**  
**Compilation of Discursive Knowledge**  
**(i.e., assertions about intractable problems)**

<b>AN Source</b>	<b>Phenomenon Considered</b>	<b>Assertions: Attributes to Be Considered to Develop Knowledge of Problems That Center on Complex Systems</b>
AN October, 1996 Siegel, <a href="#">1996</a>	Sociocultural contexts: The sociocultural contexts of uses and meanings of language  Cultural ecology	The study of language stands at the core of human culture  Culture is a continuously negotiated process [Like a flowing river, growing by input from other streams, sometimes disappearing, or emptying into a large body of world cultures]
AN November, 1996 Fessler, <a href="#">1996</a>	Culture constituted as systems	Culture is a complex system that encompasses particular formats that function to create congruence between systems such as the emotional system, the system of production, the ideological system that frames display of emotions systems and social stratification and social order systems  Accumulation of surplus is a necessary condition for development of social stratification  The manipulation of surpluses is associated with corresponding degrees of complexity in social organization
AN December, 1996	Human Development: Forms of knowledge	Forms of knowledge are linked to the process of culture, i.e., the process of the human imagination dealing with the unknown

<p>Shweder, <a href="#">1996</a></p>		<p>Different conceptions of forms of knowledge divide the social sciences</p>
<p>AN January, 1997 Hill, <a href="#">1997</a></p>	<p>Human Language: Differentiation</p>	<p>Complexity attributes of human language include their diversity</p> <p>Relationships exist between language diversity, i.e., 6000 to 7000 late 20<sup>st</sup> century languages, and the diversity of human knowledge</p>
<p>AN February, 1997 Urban, <a href="#">1997</a></p>	<p>Representations of culture</p>	<p>Myths (narratives or stories) render the world meaningful</p> <p>Consequences of myths are related to variations in acceptability of understandings of what makes the world intelligible</p> <p>Truth claims are included in culturally circulated discourses. The basis of the appeal of this type of discourse can be subjected to ethnographic scrutiny</p>
<p>AN March, 1997 Connors and McGrath, <a href="#">1997</a></p>	<p>Multidiscipline study of medical systems as social phenomena</p>	<p>Power structures risk, i.e., complex social systems such as poverty, power, risk and vulnerability are linked in different contexts in variable ways</p>
<p>AN April, 1997 Goodwin, <a href="#">1997</a></p>	<p>Communicative Competence: Scenes that compose the life world of children</p>	<p>Language is a defining feature of humankind</p> <p>Language constitutes a core form of social organization: a symbolic medium</p> <p>Children acquire what it means to be communicatively competent, and to display being human in their society, through participating in diverse culturally situated practices and linguistic routines</p>
<p>AN May, 1997 Morgen, <a href="#">1997</a></p>	<p>Epistemic communities</p>	<p>The features of epistemic communities include institutional practices on how a problem gets noticed and defined as worthy of study</p> <p>The consequences of changes in the composition of credentialed knowers is critical reflection on what is known in social sciences</p>

		The consequences within systems of knowledge are related to multiple gatekeeping practices i.e. funneling particular categories of students into certain institutions and certain topics of scholarly inquiry into some rather than other journals
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The possibilities about how explicitly stated assertions about subject areas and knowledge areas may eventually evolve into representations and specific research propositions have been a recurrent theme in discussions of the structure of science (Nagel, [1961](#)). As elaborated by Goldman ([1997](#)), the notion of propositions has been valuable in the last two decades of discourse processes research on academic genres and text structures and is a notion we believe is an important resource that provides readers with a method for critical examinations of the known and unknown presented in the discursive products of knowledge producing communities as well as the wealth of text available on our *Information Age* on the Internet.

The term proposition, as the etymology of the words "propose," "pose," and "posit" points out, remains useful because of the functions it can serve. The scientific function of such assertions has long been recognized as a beginning point of data slowly resolving into specific research propositions and the investigators' own commitments to particular points of view (e.g., Dillon, [1984](#); Lindlof, [1995](#); Smith & Mukherjee, [1994](#), Wallat, [1991](#)).

The third step we used in the analysis combined Goodwin's ideas on coding as a practice in articulating *Professional Vision* and Thompson's illustration of features of ideology ([Appendix B](#)) that can be identified across the extensive range of text available as one result of the expansion of mass communication technologies. In Thompson's terms, "ideology is the thought of the other, the thought of someone other than oneself" ([1990](#), p. 5). To characterize a view as "ideological," is to critique it in terms of a broad methodological framework within which ideas about the concept of culture that are included in the discourse of everyday life "can be situated and related to one another, and within which their value (as well as their limits) can be appraised" ([1990](#), p. 20).

Thompson warns that using the coding method can be a risky practice in research "because the meaning of a symbolic form is not given, fixed, determinate" ([1990](#), p. 294). However, in our own work that adopts the assumptions of multifunctions of the use and meaning of language referred to earlier in the paper, the coding possibilities Thompson identified based on his historical review of the concept of ideology were useful in selecting illustrations of ideology statements across the American Anthropology series. Thompson's representations of features - or communicative functions - of ideology identifiable in discursive texts, were also considered useful for constructing Table 3 below because readers of this article have the opportunity to compare how other researchers have used the grid to identify ideology assertions in social policy research (e.g., Brantlinger, [1997](#)). The availability of a grid - or typology - of ideology functions to examine under specified discursive practices in fields of sociocultural research is welcome given the long held belief that discourse or coherence markers in text must be approached from a cognitive perspective (cf., Spooren & Risselada, [1997](#)).

**Table 3:  
Illustrations of Ideological Positions Among Social Scientists**

Source	Ideological Assertion
AN October, 1996 Siegel, <a href="#">1996</a>	<p>Examining the empirical data across languages in an impressionistic way is simplistic. In regard to any aspect of analysis of language, a typology approach provides a much richer view of what we know, what is yet unknown, and what is unknowable about language universals.</p> <p>Classifications of language are developed: they are not unknowns as some critics claim.</p>
AN November, 1996 Fessler, <a href="#">1996</a>	<p>An important part of expansion of knowledge of humankind is the formulation of heuristic for exploring information. However, moving to the next step in expansion of knowledge is dependent on using such information to shift levels and frames within a research projects. The virtues of shifting levels and frames have been demonstrated. Hence, researchers can ascertain a hierarchy of levels of analysis for studying a complex phenomenon as they design their research project.</p> <p>Hierarchy of 10 levels of analysis illustrated for the domain of emotion: shifting down from psychological anthropology are the analysis levels of cross cultural, evolutionary, biological, neuroscience</p> <p>shifting up from psychological anthropology are the analysis levels of social and cultural, behavior ecology, archaeology, linguistics, history</p> <p>The necessity to limit the scope of questions does not justify current omissions in the implication section of reports: discussion of the knowledge gained from addressing the questions posed for beginning the study must address what this knowledge holds for multiple levels of cultural analysis as well as and other fields of study.</p>
AN December, 1996 Shweder, <a href="#">1996</a>	<p>Anthropology has a special part to play, and claim to make, in the community of disciplines. The part it plays is providing a view [a conception] of a rigorous anthropological pluralism dedicated to ethnographic study of multiple cultural realities and alternative ways of life. The telos of cultural anthropology is to test the limits of pluralism --- the idea that things can be different but equal --- and to take you from one "place" to another "place," each supported by reason. The foundation for such an intellectual enterprise is the claim that the knowable world is incomplete if seen from one point of view.</p>
AN January, 1997 Hill, <a href="#">1997</a>	<p>Today's trend of impoverishment of the linguistic repertoire of humanity is catastrophic.</p>

	<p>Of the current repertoire of 6500 languages only 600 are likely to survive into the middle of the new century.</p> <p>What we can do however is to assist speakers of diverse languages by avoiding the kind of research that (wittingly or unwittingly) treats some languages as low - status vernacular versions of world languages.</p>
<p>AN February, 1997 Urban, <a href="#">1997</a></p>	<p>Ethnographic research occupies a privileged position with regard to the study of knowledge and its limitations. Ethnographic investigations holds out the hope of understanding the variation in truth. The purpose of studying the variation in truth is not as something that proves the equal validity of every truth claim, but rather as something that reveals the different ways in which the world can be positively tapped into the different ways in which reality is disclosed to human beings.</p>
<p>AN March, 1997 Connors and McGrath, <a href="#">1997</a></p>	<p>Knowledge is only as good as the ability to put it to use.</p> <p>Leaps in understanding in the past on the complexity of medical problems that center on systems of extraordinary complexity often do not survive the journey into the future.</p> <p>What is truly unknowable is whether, when the next pandemic strikes, we will make use of the knowledge gained from lessons learned.</p>
<p>AN April, 1997 Goodwin, <a href="#">1997</a></p>	<p>It is time to take children's linguistic and social worlds seriously; to give voice to their social worlds and concerns.</p> <p>We need to move children from the margins to the center of anthropological inquiry. Over 40% of the world's urban population will be children 15 years and younger by the year 2000. More than 15 million children in refugee camps experience the world differently that their parents and grandparents.</p> <p>Socialization should be treated as communicative competence, not merely a fundamental psychological process.</p>
<p>AN May, 1997 Morgen, <a href="#">1997</a></p>	<p>Changes in the composition of the credentialed knowers (i.e. an enlarging mass of US scholars of color, Third World intellectuals and Euro - American women) have been the most powerful force in late 20<sup>th</sup> century anthropology.</p> <p>We should defend affirmative action as a policy crucial to the goal of pushing the borders of knowledge in new directions that will help social sciences in the 21<sup>st</sup> century.</p>

Our particular interest in constructing the Table 3 analysis of AN contributors' elaboration on "The known and unknown" stemmed from our involvement in policy studies teaching and

research. One area that is singularly lacking in both teaching about formulation of social policy and utilization of policy analysis research is the subject of ideology (Wallat, [1995](#)). Despite the extended circulation of symbolic forms of mass communication in the 20th century world, "its nature and implications have received relatively little attention in the literature of social and political theory" (Thompson, [1990](#), p. 2). Where there is insight about the relationship between language and policy there is also oversimplification "about the nature and role of ideology its relation to language, power, and social contexts, and the ways in which ideology can be analyzed and interpreted in specific cases" (Thompson, [1990](#), p. vii). Perhaps, as Thompson ([1990](#)) suggests, the lack of attention to the maps, positions and courses being communicated and sold across social science (cf., Frake, [1977](#)), is related to the negative connotations surrounding ideology. Or perhaps, lack of attention to ideology in social science documents is related to a second side of the story; a legacy of the many transformations the concept has undergone in the past two centuries.

[Appendix B](#) includes a summary of the code we used as a heuristic to identify illustrations of ideological positions among social scientists (Thompson, [1990](#)). Thompson developed this coding schema to highlight how consideration of ideology informs the continuous and lively theoretical debate in social science. Similar to the inclusion of Dillon's approach to making propositions visible in social science, we think readers may find the summary useful for other critical examinations of social science literature. For example Brantlinger ([1997](#)) has published the results of her use of this heuristic in helping educators and the general public identify the values and social implications of institutional practices that have been constituted as the category of "handicapped" has been applied to individuals and groups.

Table 3 is an attempt to illustrate that ideology is part and parcel of the study of humankind.

## Summary

The challenge of the *Information Age* within and across occupations and course work discourse tasks is discerning implicit or hidden relationships and connections about what is known and unknown. Completion of particular discourse tasks to address educational and social service policy problems and issues requires the ability to use multiple language functions to locate, interpret and summarize information sources (Wallat & Piazza, [1991](#), [1997](#); Wallat & Steele, [1999](#)). At the same time, the practices of human development research in information producing communities also serve a variety of ideological functions. We acknowledge that undertaking "the interpretation of ideology is to engage in a risky, conflict laden activity...because the meaning of a symbolic form is not given, fixed, determinate: to offer an interpretation is to project a possible meaning" (Thompson, [1990](#), p. 294). [Appendix B](#) and Table 3 are examples of social scientists' undertaking the risky activity of interpretations of ideology. However, the challenge of entering the realm of claim and counterclaim about how theoretical and methodological proposals on the known and unknown are situated, valued, and legitimated still remains in need of being appraised.

Part of the critical examinations of the last decades of the 20<sup>th</sup> century included appraisal of the limits of science, including the social sciences, through debate on what is known, unknown, and unknowable. As Brown and Duguid ([2000](#)) point out, the current emphasis on critical

examinations of data across both the academic and business world is an artifact of twenty five hundred years of unresolved epistemological debate seeking rigorous definitions of knowledge and learning "in relation to practice as distinct from information" (2000, pp.117-118). They argue that moving between the known and unknown depends upon exploring "aspects of society that play a critical role in shaping not only society, but information itself, making information useful and giving it value and meaning" (2000, p. 33). Using the analogy of the contribution of the railroad to the industrial revolution, they suggest that stories about the life of documents cannot be told by looking at the product itself or the technology that has contributed to the information revolution. Just as social forces shaped "the development of the railroad, determining where it ran, how it ran, and who ran it," (2000, p. 33) a consideration of what is known and unknown depends upon recognizing that people are negotiating all the time. The unknown becomes visible through the results of interpersonal contacts, including conversations, narratives (stories), and contacts through information networks.

In particular, Brown and Duguid critique debates about the known and unknown that neglect to consider the limits of information. In their view, moving between the known and unknown means taking on social and psychological issues that have been avoided in the past. "To understand where to go next, it is time to open the aperture and look around" (2000, p. 41). Developers and futurists must recognize that dealing with the unknown "requires seeing the difference between information-processing agents and human agency" (2000, p. 62).

To say this is not to belittle information and its technologies. These are making critical and unprecedented contributions to the changes society is experimenting. But it is clear [from economic and social historians stories of industrial and technology revolution] that the causes of those changes include much more than information itself" (2000, p. 32)

Additional examples of Brown and Duguid's propositions on areas that need to be included in critical examinations of current practices in a data rich society have been identified by other experts in information technology (e.g., Finneran, 1999; Kirby, 2000) and researchers who have been working with CEOs searching for how to manage their organization's knowledge in a much more explicit fashion (e.g., Ruggles, 2000; Stucky, 2000). The extent of interest in developing understandings of the sources of new ideas, and how knowledge functions in organizations, is evidenced by the extensive number of World Wide Web sites that have been established to keep business informed of advances in ideas associated with "what is known and unknown" and new terminology that can be used as observation guides for everyday activities (e.g., [www.business.com](http://www.business.com), [www.knowledgeinc.com](http://www.knowledgeinc.com), and [www.businessinnovation.ey.com](http://www.businessinnovation.ey.com), [www.strategicpracticesgrp.com](http://www.strategicpracticesgrp.com), [www.diagnosticstrategies.com](http://www.diagnosticstrategies.com)). For example, Armstrong and Novins (2000) and Ruggles (2000) argue that evolving definitions of knowledge management, knowledge communication, knowledge transfer, and knowledge capital are major possibilities for acting on alternative models of learning and recombining existing ideas into new ideas.

In their report of the results of extensive discussions with managers about how knowledge functions in organizations, Davenport and Prusak (1998) propose that the potential to enhance *Working Knowledge* can be realized as critical examinations of using knowledge across everyday contexts. Their representation of potential is presented in the form of a repertoire of questions. We end this article with Davenport and Prusak's *Working Knowledge* questions because they

serve to illustrate Brown and Duguid's advice to look around at *the social life of information* (Brown & Duguid, 2000) and also address the last part of the topic of this paper, which is "Where do we go from here?"

How does knowledge look and sound in everyday life and work?

What do we talk about when we talk about knowledge?

How is knowledge different from data and information?

Who has it?

Who uses it?

What do we do about knowledge?

What do successful knowledge projects look like and how do we know if they have been successful?

As physicists, social scientists, corporate psychologists and CEO's of successful companies point out, knowledge management has always been important to the education, commerce and the sciences. It is not that knowledge management is new (Leonard-Barker interview in Manesco, 2000). Rather the scale at which it has begun to be emphasized as a public interest, fulfills the function of establishing a category by which national attention is focused on the learning out put of knowledge organizations such as businesses and schools (Popkewitz, 1991). Schools and universities teach and reward skills that have a lot to do with paying attention to detail, analyzing options, and decreasing uncertainty. While using knowledge rather than moving it (cf., Davis interview in Kirby, 2000, p.1) does require these kinds of knowledge, developing new knowledge in the *Information Age* "also requires a comfort level with not knowing" (Kao, Gell-Mann, & Galvin, 1999, p. 1).

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## Appendix A

### Types of propositions (practices used across disciplines as ways of seeing, interpreting, and presenting content)

#### Chart Definitions (cf., Dillon, 1984)

#### Group 1: Properties (Attributes of Phenomenon\* Considered)

1. Existence/ affirmation - negation (i.e., whether P is)
2. Instance / identification (i.e., whether this is a / the P)
3. Substance / definition (i.e., what P is)
  - a. nature (i.e., what makes P be P)
  - b. label (i.e., whether "P" names the P of interest)
  - c. meaning (i.e., what P means)
4. Character / description (i.e., what P has)
5. Function / application (i.e., what P does)
  - a. modes (i.e., how P acts)
  - b. uses (i.e., what P can do)
  - c. means (i.e., how P does it or is done)
6. Rationale / explication (i.e., why or how P has a certain attribute)

## **Group 2: Comparisons (Comparative attributes of P and X)**

7. Concomitance (i.e., whether P goes with X)
  - a. conjunction (i.e., whether P and X are associates)
  - b. disjunction (i.e., whether P and X are alternatives)
8. Equivalence (i.e., whether P is like X, and wherein)
9. Difference (i.e., whether P and X are different)
  - a. disproportion (i.e., whether P is more/ less than X)
  - b. subordination (i.e., whether P is part/ whole of X)

## **Group 3: Contingencies (Contingent attributes of P and X)**

10. Relation (i.e., whether P relates to X)
11. Correlation (i.e., whether P and Q covary)
12. Conditionality (i.e., whether or how if P then X, or if Y then P)
  - a. consequence (i.e., whether if P then X, or what Y then P)
  - b. antecedence (i.e., whether if X then P, or what Y then P)
13. Biconditionality (i.e., (causality) whether or how if P then X and if X then P)

## **Other (Other attributes or ways of knowing P)**

deliberation (i.e., whether to do and think P)

unspecified (i.e., to know P in other ways)

rhetorical (i.e., no knowledge or no answer)

**Key \*** The letter P is just a placeholder. Words are analyzed as representations individuals use to communicate ideas about phenomenon they observe, value, and/ or devalue. Hence, as you find and read sources that include words such as culture, the letter P should be replaced with these words (e.g., Whether culture is [existence/affirmation - negation; Whether language is an instance of culture; [What makes culture be diverse].

## **Appendix B**

### **Thompson's (1990) modes of ideological operations and strategies of symbolic construction.**

LEGITIMATION: Relations of domination are represented as just and worthy of support.

Rationalization: A chain of reasoning defends a set of social relations or institutions and seeks to persuade an audience of their worthiness of support.

Universalization: Institutional arrangements that serve the interests of some are represented as serving the interests of all.

Narrativization: Justifying actions are embedded in stories.

**DISSIMULATION:** Relations of domination are concealed, denied, obscured, or represented in ways that deflect attention.

**Displacement:** Positive or negative connotations are transferred to other objects or individuals.

**Euphemizations:** Institutions, actions, or social relations are (re)described in terms that elicit a positive evaluation.

**UNIFICATION:** Individuals are embraced in a collective identity, irrespective of any differences and divisions.

**Standardization:** A certain framework is promoted as the shared and acceptable basis of symbolic exchange.

**Symbolization of unity:** A collective identity is diffused through a plurality of groups.

**FRAGMENTATION:** Individuals and groups capable of mounting a challenge to dominant group are dispersed.

**Differentiation:** There is a focus on divisions, distinctions, and characteristics that disunite individuals and groups.

**Expurgation of the other:** An enemy, either within or without, is constructed and portrayed as evil, harmful, or threatening and requiring assistance.

**REIFICATION:** A transitory, historical state of affairs is represented as if it were natural, permanent, and outside of time.

**Naturalization or essentialization:** A social creation is portrayed as the inevitable outcome of innate characteristics.

**Eternalization:** Phenomena are deprived of social-historical character by emphasizing their permanent, unchanging nature.

**Nominalization:** Attention is focused on central and salient themes at the expense of other marginal or decentered ones.

**Passivization:** Certain actors and agencies are ignored and deleted.

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