

Conceptualizing Global, Economic, Social-cultural, and Ethical Frames as an Evaluative Technique or Rubric

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Abstract

The paper discusses an evaluative technique or rubric for judging students' responses to and observations on issues of computing. The paper discusses the frames of globalization, economics, social-cultural, and ethical as dimensions structuring the observations as well as the rubric.

Keywords: Globalization, economic, social, cultural, ethical, frames, rubric

Introduction

The thinking for this paper began as consideration of the content for a required course, INFS4170 Global, Economic, Social, and Ethical Issues of Computing, in the Computer and Information Systems department (hereafter GESE). It has turned into a consideration of an evaluative rubric. The course is taught as a part of an accredited program by ABET CAC (Accreditation Board of Engineering Technology Computing Accreditation Commission).

The course lectures and initial assignments provide background in conceptions of global, economic, social-cultural, and ethical dimensions; the dimensions or frames are represented in the form of taxonomies which serve as a basis for description, analysis and discussion of cases (assigned reports) about "issues" of digital living. These issues center around social-cultural and economic and global uses of information and information systems. According to Hauser (1986), issues arise when interacting and contradictory but "correct" or valued perspectives about the world are in play; these differing perspectives are differing observations or takes on things. As a result they create a sense of uncertainty or instances of conflict in situations.

The problem of describing and analyzing issues is a problem of uncovering, describing, and analyzing values which form the frames of situations. The issues discussed and thought about are freedom of expression in cyberspace, intellectual property, privacy and access to information, security and cybercrime, liability, reliability, and safety of software and digital devices, fair competition and Internet access based on cases presented in Spinello (2003).

The rubric consists of the ideas, represented by key terms, of the frames; a rubric (see Webster or

any dictionary) is the way by which red-lined words and phrases (figuratively speaking) in a student's responses would match the "canonical" taxonomy of a frame. A rubric is grounded in the goals and conceptions or knowledge domains of the course, and ultimately grounded in a discipline's view of things.

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Goal of Course

The course's goal is to habituate students to thinking and analyzing issues of "digital life" (Negroponte, 1995) in terms of global, economic, social, and ethical dimensions or frames so that they continue to do so after the ending of the course. To this end, the course's objectives are to have students know and understand ideas about globalization, attending economic implications, social-cultural contexts, and ethical theories. The course's goal proposes that students ought to be able to use the ideas encapsulated by the global, economic, social-cultural, and ethical frames to describe and critically analyze issues of computing. The goal is about inculcating a knowledge and understanding of the knowledge domains or frames which provide for the probability of structuring experience a certain way. Other objectives are that the students are to apply the knowledge and understanding in a critical analysis and discussion of selected issues of computing.

Do a professor and student have the same experience of the subject matter of a course? No, it may depend upon what and how much of the experience as public (what is public is not necessarily common) is enacted within public space. The public space of learning is the physical place, the physical things involved, but also the language used, the metaphors, stories, and terms, used to describe and analyze the phenomena depicted by a frame. The public space is a situation; it is a time and space of interacting; it is more because it is a situation of exchange, transactional, of the stuff of experience (Dewey, 1938). A public situation is a frame and structure of discourse, doings and sayings.

A rubric can be about content and subject matter, or presentation. This rubric is a frame for judging, deciding, subject matter, and knowledge of it, by its qualities and quantities of presentation. A frame, in its taxonomy, represents a habitual take (R. T. Lakoff, 2000), an interpretation. If a frame is canonical, it represents the probable "warranted assertions" about experience. A canonical frame must be based on research or inquiry into the frame as a theoretical perspective on experiencing the world. It is not mere opinion, but warranted opinion based on prior research and discussion. The probability of the use of frames rises as the use of the frames becomes a habitual means of describing and analyzing affairs, i.e., issues and problems. Indeed, issues and problems are not experienced if the frames are not habitual.

The Problem

The problem of this paper is the creation of a rubric or set of criteria for judging students' reports of observations on an issue of "digital living;" the reports are structured observations according to global, economic, social, and ethical frames (dimensions). It should serve also as a rubric for exams (there are three) in the course. Development of such a rubric has as much to do with the development of the taxonomies of the dimensions (knowledge domains) used in analysis and discussion as it does with the rubric in itself and its evaluative purpose. The problem of the rubric for GESE is the establishment of "warranted conceptions" as the basis for "warranted knowledge", and as a basis for the criteria which indicate what to look for in a response. The paper structures and clarifies conceptions in play in the teaching of the course's subject matter and judging the results of students' thinking in writing (or in discussion).

Canonical Frames or Knowledge Domains

A conception's taxonomy maps the structure of a conception in use situationally. The experience of the terrain is structured through a taxonomy (A taxonomy is the structure of the experience of the terrain). The taxonomies as conceptualizations, in their short versions, represent categories or metaphors by which experience and learning are organized (Bruner, Goodnow, & Austin, 1972; Frake, 1972; G. Lakoff & Johnson, 1980; Norman, 1983, 1988; Pinker, 1999, 2007; Sturtevant,

1972). The taxonomies provide key concepts and terms to be used in conversations (discussions) and writing. They provide conceptual categories for the organization of experience and thinking (and writing).

A taxonomy represents a conception, domain or frame, at a general level; similarly, a situational use of the terms of a taxonomy represents an understanding of a conception, frame or domain, in a specific instance or a particular case. A taxonomy represents a domain or knowledge space and represents a looked-for pattern of use. It provides a set of recognizable “marks”, “tags”, or “hooks” (the key terms) signifying an understanding and reflexiveness which show up in the words used and implied or referenced context in a response (Dewey, 1938; R. T. Lakoff, 2000). The uses of marks, tags, or hooks indicate a particular take on the matter. The taxonomies also represent in a manner of speaking how logically structured observations are made.

A course represents subject matter as theory about a discipline’s affairs. A discipline is a frame of assertable propositions, a theory about the whats which are knowable and the hows by which the whats are knowable. Disciplines, fields of study, and their curricula are ontologies based in language use. An ontology of a discipline and its curriculum is a conceptualization of things that exists for and can be studied by a discipline and its curriculum; it is a framework of the discipline and its curriculum. An ontology is background and foreground of a discipline. The ontology posits the existence of affairs, states of affairs, objects, methods of research and discovery and what they are, and how they are as legitimate objects that are known and to be known.

Disciplines and their curricula are language affairs and are representations of enduring and stable systems of meanings shared. These language affairs of disciplines represent a perspective on the world, a worldview. A discipline and its curriculum present that perspective or worldview. The lexiconic terms, algorithms or models, formulae, major concepts, metaphors and analogies, and theories and methods create and construct a landscape wherein practitioners of a discipline and its curriculum live and work. A discipline and its curriculum is a public space for discourse. The explicit teaching of a conception or a frame as found or elaborated in a discipline is the explicit attempt of inculcating a rubric. A rubric is an explicit way of doing a take, or an interpretation, which is afforded by the frame as an explicit part or conception of a discipline.

Global Frame

The global frame is a context-setting and canonical frame for the course. Globalization is not a new phenomenon (Brake, 1997; Hooker, 2003; Moran, Harris, & Stripp, 1993), nor is it an “American” phenomenon, although some may think, along with Friedman (2000), that it is an American invention. The idea was probably first formulated with the creation of the first globe manifesting an understanding of the interconnectedness of things. Friedman (2000, 2007) sees globalization as a current phenomenon focused on an integration of world-wide systems. It is a systems view of economic markets, societies (Friedman calls them nation-states,) and information technologies and systems, e.g., the World Wide Web. For Friedman, it is a process of democratization (American style).

Some key terms and definitions of the global frame indicating a partial canonical taxonomy are: Integration: Markets, Nation-states, Technologies; Dominant culture: Practices, Values: Democracy, Freedom; Friedman: Lexus: Modernity, Olive tree: Tradition; Contexts: Economy, Polity, Culture. A key definition is: globalization: “...is the inexorable integration of markets, nation-states and technologies...enabling individuals, corporations and nation-states to reach around the world farther, faster, deeper and cheaper than ever before...” (Friedman, 2000, p. 8).

Economic Frame

The economic canonical frame creates the possibility of generating issues around a notion such as intellectual property, privacy and access to information, ownership of digitalized material, and the value of one's work. The major concepts of the economic frame which are discussed and used in analysis of the issues are self-interest, utility, market, opportunity costs, capital, and scarce resources. The economic frame works only if we are able to abstract certain concepts or things from the sociocultural and moral matrix of life. We have to see that everything, in some fashion, is a resource, to be used in the production of something else which we would prefer. We have to see that the "profit" motive is another way of thinking or acting according to our preferences which are things valued or worth something to us because we want to use them, because they are useful in our lives, to increase pleasure. At the core of all things economical is the sense that we own our labor, our time or our space, our knowledge, and that these are beneficial and useful to us in interacting in situations, in the "market," in enhancing our pleasure (Etzioni, 1988; Flynn, 2005; Harford, 2006; Heilbroner, 1999; O'Rourke, 2007; Wheelan, 2003).

Some key terms and definitions of the economic frame indicating a partial canonical taxonomy are: Utility: Measure of happiness, Worth or value, "Maximize happiness"; Self interest: "personal preferences", self interest & common good; Opportunity costs; Capital; Scarce resources; Competition; The Market.

Social-cultural Frame

The social-cultural frame is discussed as a social affair based upon layered sets (multiple social groups) of shared systems of sense (meanings) and practices (Hofstede & Hofstede, 2005; Hooker, 2003; Trompenaars, 1994; Trompenaars & Woolliams, 2003). The social-cultural frame provides a conception of a bounded life world (*lebenswelt*). It is an environment of relationships based on empathy and sympathy (Dewey, 1986; Goleman, 1995, 2005) and social agreements (Skovira, 2003). A primary subframe of this frame is the moral aspects of relationships. Patterns of behavior (social norms) reflect a sense of the "good" for the group and the individual. Every social group and culture provides patterns or habits of behavior, values, as ways of dealing with experience. These patterns of behavior represent social norms. These habits are both social and personal (Hofstede & Hofstede, 2005, p. 47; Hooker, 2003). We participate in different cultural levels. Our sociocultural personality consists of a complex matrix, the result of our participation in different levels of shared systems of meanings and practices. The basic different shared systems are family, educational institutions, professions, work-places, regions, and societies (Hofstede & Hofstede, 2005). Our social habits consist of multiple levels of learned meanings (values) and practices. A person's system of meanings and practices are the results of aggregated social groups' systems of meanings and practices. The social frame is discussed as the social-cultural dimension.

Some key terms and definitions of the social-cultural frame indicating a partial canonical taxonomy are: Lebenswelt (life world, everyday world): Empathy & sympathy; Personal & moral frame; Shared systems of meanings and practices; Social agreement: Tacit moral frames, Agreements & arrangements, Tacit & explicit contract or agreement, "unwritten" codes of behavior, Environment of shared systems of meanings; Social norms: Practices, Meanings, Values, Virtues, Expectations, Structure of behavior, Habits of behavior, Categories for organizing experience, Explanatory principle or rule of behavior, Standard or criterion of behavior, Learned sense of why & how to act publicly.

Ethical Frame

The ethical frame is a systematic discussion of deontology, utilitarianism, and eudaimonism (virtue ethical theory) as formal theories about the moral sphere of the social-cultural frame (Hume, 1983; Kant, 1959; Mill, 1957; Murdoch, 1993; Skovira, 2003; Solomon, 1992, 1997; Wilson, 1993). Ethics, even when conflated with morality, is not about morality. Ethics is about the construction of formal and systematic descriptions and explanations of the senses of axiomatic conceptions and the principles, ascribed to by an individual, of a moral frame. Ethics is a systematic conceptualization of a moral frame. Ethics is theoretical. Ethics is a formal and systematic articulation of cognitive-emotional conceptuials (mental models) dependent upon shared systems of meanings silently (tacitly) known and used, habitually acted out in the world, the moral frame, to which a person is personally committed as a worldview. Ethical theory is the description, explanation, and justification of the reasons, purposes, ends-in-view of one's moral frame.

Some key terms and definitions of the ethical frame indicating a partial canonical taxonomy are: Ethics: Explicit & systematic justification and theory of moral behavior; Values & virtues; Theories: Utilitarianism: The results of action or a rule (principle or policy) are "good" if the principle (rule): The greater "good" for the greater number of people, can be applied; Deontologism: The action is "good" if the principle (rule): the intention and obligation to act "rightly" or in a "good" manner would be universal (for humanity), can be applied; Eudaimonism (well-being or virtuous living): The action is "good" if the principle (rule) : act in moderation and in accordance with socially acceptable and personally acceptable habits of doing and saying things, can be applied.

The Evaluative Rubric

The rubric is a map between the knowledge domains or frames presented in the forms of taxonomic categories which name properties and attributes of the domains or frames. A frame is laid out in a taxonomy. Knowledge domains and their taxonomies indicate a world of discourse among practitioners, each of whom may have a partial conceptual model mapped to (and from) the domain. The evaluative technique or rubric consists of taxonomies representing conceptualizations of the dimensions or frames (Bateson, 1972; Goffman, 1974) and knowledge domains (Spradley, 1980) of globalization, of an economic perspective, of a social-culture context, and of ethical theories in play. The taxonomies become the criteria in the decision making model used to assign "grades" to a response. A rubric indicates what will be used as evidence of a proper and appropriate use of a frame, conception and its associated attributes, in explaining an understanding of a phenomena. A rubric creates a relationship between a student's response to a particular question and the canonical taxonomies of the frames. These frames have been presented and discussed and researched by the students in the first half of the course. A rubric is an explicit way of doing a "take" (R. T. Lakoff, 2000), or an interpretation, which is afforded by the frame which is an explicit part or conception of a discipline.

Use of the Rubric

It is assumed that students will have partial views, personal conceptual models (Norman, 1983, 1988), representing the taxonomies of globalization, economics, social-cultural, and ethical domains, which they actually put into play in discussing and analyzing an issue or responding via observations to a question. They are conceptual maps. They are "takes" on the matter based on the students' interpretations of the domains (R. T. Lakoff, 2000). Personal conceptual models are "rich" when they are complex in linked relations across multiple conceptual models and, if detailed enough, in linked relations in depth. Depending on their "richness," these personal conceptual maps allow for an imaginative (or unimaginative) response to the question. An imaginative and persuasive response provide "interesting" marks, tags, or hooks which reference the taxo-

conomic categories of the knowledge domains. They provide a means for “thick” analysis and critical reasoning. These discussions either persuade or they don’t according to the student’s integrative and contextualized use of the taxonomic categories or key concepts (key terms) in the discussion. These responses expressively imply conceptual models structuring and organizing their writing.

A response is very persuasive when it contextualizes and makes judicious use of appropriate “signs”: the names of appropriate concepts representing a conceptual model or taxonomy and demonstrates as far as possible and understanding of a conception of the globalization, economic, social-cultural, or ethical frames. A conscious use of key terms, tags or hooks, of a taxonomy in an observation or response indicate an awareness of the elements of the taxonomy and their appropriate use. An example of this would be that the use of the metaphors of “Lexus” and “Olive tree” and the name of the originating author of these metaphors appropriately would effectively demonstrate a conceptual ability to handle the material and use the frame to critically analyze an issue.

The question was part of an exam, for the example here, looking at the two notions of privacy and security as values of digital life and thinking about them as aspects or factors in global, economic, social-cultural, and ethical dimensions of digital life. The student’s response is compared to a taxonomy in terms of relationships and concepts used from the frame. In particular, an example of applying the rubric of a canonical taxonomy of a frame (in this instance, a discussion of the issues of privacy and security within the global frame) to a student’s response is as follows (the underlined terms indicate a match or use of tags to the frame’s taxonomy):

Unlike some 20 years ago, our communicatory grasp extends from one end of the world to the other. Technology surpasses itself by leaps and bounds every year offering its knowledge and access to individuals across the globe. The concepts of security and privacy themselves blend together to represent facets of the lexus and the olive tree (according to Friedman). Security and privacy are steeped in human tradition; after all, security is the 2nd most important human need after physiological needs such as food and water (according to Maslow). It is no surprise that this fundamental need extends into our digital lives as in conjunction with our actual lives. This human tradition is an example of security and privacy as values representing the olive tree.

Sometimes a student relates a “true life story” in a response indicating a take on things. A response is not persuasive if there is no anchoring of a story in the knowledge domain. The links or hooks are tacit, and requires a “reading-in” of context and knowledge domain “marks” by the instructor. An unpersuasive situation would occur when there is no significant pointing out of relationships (there are no tags” or hooks” to the taxonomic elements of the global, economic, social-cultural, or ethical dimensions or frames).

Conclusion

This paper is a brief discussion concerning an evaluative rubric for a course. The paper presents some ideas concerning the structure of the evaluative rubric and makes explicit conceptions in play in the teaching of the course’s subject matter and judging the results of students’ thinking in writing (or in discussion) a response to an exam’s question.

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Biography

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