

A Conversation Design for Systemic Research on and Betterment of the Ethicality of Information Systems Embedded in Human Organizations

Arne Collen*

Abstract

A general conversation design is described. It is a prototypical map that can be detailed and followed to facilitate human inquiry and foster improvements at the interface of social and information systems in human organizations. The design consists of four stages. The Es of praxiology is a conceptual scheme to articulate discussion, as are the use of case studies in the design. Two case study exemplars, one about the ethics of information systems and the other about ethics in research, serve to provide the substance by which participants can converse, and repeatedly traverse the four stages to generate a stream of discourse.

Introduction

This paper is ambitious in that it attempts to weave together four strands. The bundle represents different human interests as well as potential uses of the four strands in conversation design to be applied in organizational settings.

The first strand is the subject of ethics in human organizations. We can describe and discuss this subject in terms of ethical dilemmas faced by individuals. An ethical dilemma can become an ethical problem for not only those who become cognizant of it, but also those comprising the social system as a whole. The general interest here is to examine some of those dilemmas that have in common the generation, use, and management of information.

The second strand is about pedagogy. Educators, trainers, team leaders, facilitators, and consultants have a stake in know-how that assists them to move conversation constructively forward. Information is the life blood of conversation. Means to exchange and use it are vital to the design and continuance of the conversation. Practices that work with persons and groups in conversation are practices that orchestrate the process toward fulfillment of a purpose, objective, and group defined end. Such practices must be present to implement successfully the conversation design.

* Saybrook Graduate School, 450 Pacific, San Francisco, CA 94133 USA, email: acollen@igc.apc.org

The third strand is the application of methodology and praxiology to human inquiry. Given the centrality of human conversation in most systems research methods for organizational contexts [6], conversation designs are critical and core pieces to maximize chances of successful implementation of an inquiry process.

The fourth strand is the study of conversation design as a neglected subject area in systems methodology. Although the paper converges on my interests to delimit itself to a particular focus (e.g. information, ethics, and research), it is encouraged that articulation of other foci and case study in the broadest sense be pursued, such that we may know the extent of the generic nature and applicability of conversation design to the study and amelioration of human organizations.

We know the separation of these strands is rather artificial in a given conversation. We must keep this fact in mind as we follow the conversation design and fill it with specific examples and cases. Nevertheless, various practitioners (consultants, cyberneticians, designers, methodologists, pedagogues, praxiologists, systemists, and team leaders) may find the design of the conversation useful for their own particular purposes. The consistent use of three key concepts, *human activity system* in reference to the human collective [3], *design* as a key component of every method and methodology [4], and *conversation* as a systemic form of human discourse [6], are intended throughout this paper. Preference is given to information systems and their interface with human beings and communication technologies [5, 7]. The term *information* is used in this paper to designate the subject content communicated between and among persons in the course of conversation.

Design of a Conversation

We can note several characteristics of design that pertain here, but detailed more fully in [4, 6]. The design of a conversation is applied to accomplish a particular end. It serves as an overarching framework. It describes the configuration of resources needed to conduct the conversation. It provides its designer a larger view as well as a horizon. Designing the conversation is the process of design, and the product of the process is the conversation design. The designing may be accomplished as a preliminary and preparatory phase to conducting the conversation for which the design is intended. Or the design may become an ongoing part of the conversation itself, that is, an emergent reality of the conversation that can be articulated (but is typically not). The conversation design can help its users to guide the conversation in the classical meaning of the cybernetician at the helm. There is no cookbook of designs or set of conversation designs to steer the course of a conversation. Theoretically, there may be an incomprehensible number of different designs possible.

In the next section of this paper, as designer, I provide a conversation design with broad potential for application. However, it is highly recommended and more systemic in my opinion that the participants themselves develop their own conversation design as a preliminary by setting parameters, ground rules, and direction. We see a clear and published example in [8], whereby the group worked up to their own group report, doubly germane here, because it describes their conversation about designing conversations.

A Conversation Design for Ethical Dilemmas, Ethical Issues, and Ethical Problems

The proposed design is outlined in Table 1. It consists of four stages. A group leader or facilitator is required, who is familiar with the design as well as various means of group facilitation. The facilitator can be either internal or external to the larger social system proper in which the conversation group is situated. The design is intended for a workshop and small group setting with from half dozen to a dozen participants.

Table 1. A conversation design to examine ethical dilemmas, issues, and problems in human activity systems

<p><i>Participants:</i> 6–12 persons, including a group facilitator.</p> <p><i>Time:</i> one 1–2 hour session.</p> <p><i>Place:</i> comfortable and quiet room, roundtable or circular seating arrangement, and recording/display materials.</p> <p><i>Stages of the conversation:</i></p> <ul style="list-style-type: none">I. SITUATE ethics in communication and activity in the human organizationII. DESCRIBE & DISCUSS cases that exemplify ethics of information systemsIII. DESCRIBE & DISCUSS cases that exemplify research ethics of information systemsIV. CONCLUDE

Although this design is configured for one session with a cross section representation of the social system (e.g. association, business, club, corporation, institution), it need not be restricted. More likely a successful initial conversation will lead to another and be so sustained as a self-organizing sequence for several sessions. The arrangement could just as well apply to family, network, consortium, transnational, cross-cultural, and multi-site human organizations. Further, where most bases of representation in small group processes in human organizations tend to involve selection and confinement of participants according to their prescribed role in the system (e.g. stakeholder, constituent, officer, or job title), it

happens frequently nowadays (i.e. in United States) that participants voice and represent multiple interests of their human organization. Therefore, it should come as no surprise to the group facilitator (conversation designer) that the preliminary design presented becomes a trigger to catalyze the conversation of the participants into redesigning their subsequent sessions of conversation to meet their specific interests surfaced during their initial session. In fact, the redesign may repeatedly occur over the course of several conversations.

The key focus for the facilitator is to steer skillfully the conversation and redesign process of the group towards achieving its goals within and over the course of the conversations. But I realize there may be some ambiguity of the term "conversation" here; in that, in practice, it soon becomes apparent that the usage of the term by various participants appears in reference to either a given conversation and/or a sequence of conversations. Whether those who use the term find it meaningful in its singularity (a given session or meeting), the definition I have preferred here, or in its collectivity (the stream of discourse developed over several sessions), need not impose confusion on the work at hand.

As a general guide for the facilitator and participants, the four stages of the conversation design can structure the single conversation, that is a single session. It can define the beginning, middle, and end of a session. However, it may also be equally plausible for other groups that the time needed to traverse the four stages requires more than one session. Disruptions, scheduling, and other kinds of conflicting activities may curtail the conversation. To stretch the definition of conversation across meetings may make more sense to these groups to document, understand, and conduct their process. Finally, still other groups may find it most meaningful to document and conduct their process in terms of a protracted series of sessions and reserve the term conversation as the overall label which encapsulates their entire stream of discourse.

Jargonization aside, I think the important point about the usage of terms, like conversation, design, and design conversation, is consistent public utterances of agreed upon collective understandings. Each group must decide upon its common language to communicate and work effectively. And of course, the larger organizational context is a factor as well, especially for the group to communicate its work to others outside the group.

Situating Ethics in Information Systems

To move the conversation beyond an initial familiarity with other participants is to dig into the substance of the subject. Lay definitions of conversation tend to restrict its denotation to more superficial exchanges and socializing of everyday life. However, in a design oriented science, disciplined human inquiry and organizational task oriented groups, once the initial rapport is established to constitute the group, substantive learning can proceed by its members coming to terms

with common meanings to be shared that shall contribute a vital body of knowledge to the development of the conversation.

In this design (Table 1), the key constructs that must be discussed are ethical dilemma, ethical issue, ethical problem, and ethical research issue. The questions and definitions shown in Table 2 are to prompt conversation of Stage I. They are not to provide the definitive answer to each question. The expectation is that the first stage of the conversation will consider these terms as the starting points for selecting, describing, and discussing the content of the subsequent stages. To expound upon the questions for discussion,, examples and cases can be drawn from the experiences of participants as well as such sources as [1, 2, 10]. In Stage I, the group confirms or redefines these constructs, as deemed appropriate, then moves on to Stage II.

Table 2. Defining an issue, dilemma, and problem of an ethical nature in human activity systems

<i>Question:</i>	What is an ethical problem situation?
<i>Definition:</i>	An ethical problem situation is discordance of two or more human interests, regarding what is right and wrong human behavior, that is a genuine conflict or dispute with the potential for adverse human consequences and evidenced by contrasting actions from the differing parties.
<i>Question:</i>	What is an ethical issue?
<i>Definition:</i>	An ethical issue is the argumentation, reasoning, debate, and points of discourse that, as a body of information, defines and communicates the ethical problem situation.
<i>Question:</i>	What is an ethical dilemma?
<i>Definition:</i>	An ethical dilemma is a set of seemingly equal undesirable choices to act in response to an ethical problem situation; it is a set which favors no clear path for action at the personal level and oftentimes the collective level.
<i>Question:</i>	In what ways can cybernetic and systemic perspectives inform us about ethical issues, dilemmas, problems?
<i>Discussion:</i>	Specific examples and cases.
<i>Question:</i>	In what ways can research ethics move us toward a course of action regarding ethical dilemmas and problems in human activity systems?
<i>Discussion:</i>	Specific examples and cases.

As a transition to Stage II, it is helpful to become familiar with the Es of praxiology [4], shown in Table 3. These constructs are useful to facilitate selection and description of examples and cases, because typically a given party uses one or more of them to justify an adopted position and associated behaviors, in regard to an ethical issue, dilemma, and problem. These constructs are also up for discussion, debate, and redefinition, prior to commencing Stage II.

Table 3. The Es of praxiology applied to social systems*

<p>EFFICIENCY: The fact of being an operative agent or efficient cause; fitness or power to accomplish the purpose intended; adequate power; effectiveness; efficacy; the work done by a force in operating a group or machine, the total energy expended, the ratio of useful work performed to the total energy expended.</p> <p>EFFECTIVENESS: The quality of being in regard to concern for the production of some event or condition; the power of acting upon persons or objects; that portion of an agency or force which is actually brought to bear on a particular person or object; the completion or result of an action.</p> <p>EFFICACY: Power or capacity to produce effects; power to effect the person or object intended.</p> <p>EVALUABILITY: The potential, capacity, or readiness to be appraised, estimated, or valued.</p> <p>ETHICALITY: Qualities, behaviors, or principles concerned with the science of morals, rules of conduct recognized in certain associations or departments of human life, and science of law, whether civil, political or international.</p>
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*Definitions of the five Es are adapted from *The Compact Oxford English Dictionary*, Second edition, New York, Oxford University Press, 1991.

Case Study as Means to the Ethical Aspects of Information Systems

To describe an example and a case of an ethical nature, it is most expedient to answer the most basic questions that one can ask about the case. Details thereby generated define the case for the discussion to follow. A set of such questions are shown in Table 4.

Table 4. A set of questions for generating essential description of an ethical case

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| <ul style="list-style-type: none"> ① WHO was involved? ② WHEN did it happen and what were the circumstances? ③ WHERE did it happen and what was the situation? ④ WHAT happened exactly? ⑤ Who were the conflicting parties and what interest did each party have in the matter? ⑥ What made it an ethical dilemma, issue, and/or problem? |
|---|

To discuss an example and a case of an ethical nature, there is a practical scheme which enables the group to apply the information previously presented. The scheme is shown in Figure 1. The scheme is to facilitate the conversation by prompting linkage type questions and ensuing discussion among the constructs shown in the figure.

One recent case of an ethical nature involved long standing donations of major cigarette companies to fire safety organizations in the United States [9]. Rath-

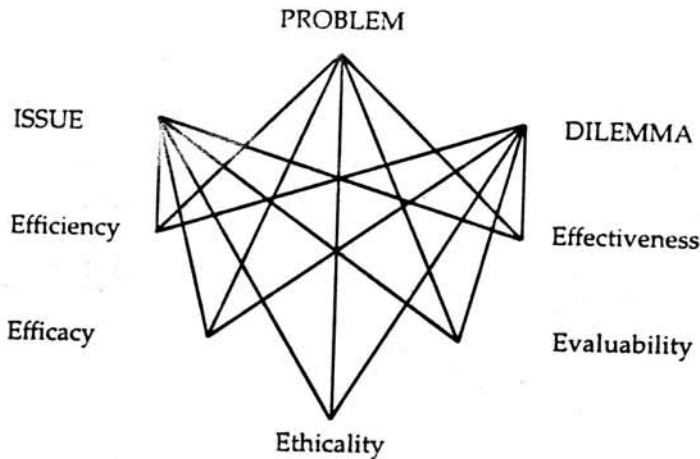


Figure 1. Schematic for discussing an example and case of ethics in human activity systems

er than the former companies manufacturing a fire resistant cigarette, known to be possible and feasible for decades, the alleged alliance between the two business sectors has led the later companies to manufacture fire retarding synthetic products poisonous after combustion and inhalation. Smoking is the nation's leading preventable cause of death, and cigarettes are responsible for one quarter of all fire deaths [9]. This case illustrates the kind of focus that may be useful with Stage II of this conversation design.

Once a case is defined, there may be several choices to steer the discussion toward the more collective level. Table 5 shows some exemplary foci for such discussion in terms of questions, the answers to which may be shaped to an issue, dilemma and problem. Again, these questions are prompts, intended to encourage participants to lengthen the list, then select one holding a high level of interest for their human organization. Such a tactic may be used by the facilitator.

Table 5. Some exemplary questions for general discussion of the ethical aspects of information systems

- ① In what ways does technology serve humans and humans serve technology in our organization?
- ② In what ways does one inform, not inform, misinform, and disinform in the course of daily communications and activities in our organization?
- ③ In what ways does the management and control of information serve to manage and control people in our organization?
- ④ What kinds of research can and cannot be conducted ethically to study the interface of information and human activity in our organization?

tor to move the conversation from specific cases to more general discourse in order to transit the group toward Stage III.

Case Study as Means to Examine Research Ethics

The third stage is intended to direct the conversation more to an action orientation. This is done by surfacing aspects of research ethics [1, 10], evidently connected to contemplated inquiry that could resolve a current case, or help prevent a known case to reoccur in the future. As in the previous stage of the conversation, the group is guided to describe and later discuss specific cases of an ethical nature, but involving the conduct of inquiry itself. In traversing Stage III, it is key that the facilitator help the group establish connections between the cases discussed in Stage II with those that are coming forth in Stage III.

Some examples of foci commonly found in the subject area of research ethics, particularly tied to the management and control of information systems are: jeopardizing human welfare, impeding human resource development, adverse ecological impact, biased advocacy, selection and tampering, misinforming, and plagiarizing. Such rubrics may be extracted from the description and discussion of the specific research cases in organizational settings.

One recent case in the United States, for example, involved a student suing her school and instructor based on religious reasons, because he would not allow her to avoid the dissection of a pig in their biology laboratory class [11]. Although alternative options existed for laboratory instruction (e.g. computer simulation), the instructor took the position that the situation violated his academic freedom of instruction. This case illustrates the kind of focus that may be used with Stage III of this conversation design. Each party may have a plausible ethical stance, but the organization must find some means to converse, compare, prioritize, and justly act to reconcile the conflicting parties.

Research in organizational settings commonly involves comparisons among different conditions (e.g. forms of instruction, interventions, procedures, programs, samples, and treatments). Some well established approaches of research methodology for human inquiry in this regard are focus group research, observational method, program evaluation, and survey research. More specifically, various constituencies of an organization may be sampled and assigned to conversation groups (conditions) with the expectation of making comparisons later across groups, in order to consider the quality, diversity, generalizability, convergence, reliability, and validity of findings. As with any focus of research, considerable attention may be given to such methodological concepts and principles in the inquiry and amelioration of ethical dilemmas, issues, and problems in human organizations. To avoid a likely misinterpretation of the previous statements, it is important to emphasize that the notion implied here is not to conduct controlled

experiments in organizational settings, pitting one ethical position against another for comparative purposes. The idea is to transfer and redefine appropriately select concepts and principles of sound research practice to responsibly justify, enable, and document conversation and action oriented human inquiry [4, 6].

Transitioning Toward Ameliorative Action

The fourth and last stage of the conversation design is to conclude the conversation. To use the term "conclusion" is not to imply that the conversation is terminated. The emphasis here is to develop closure of the immediate process, in order to traverse to the next iteration of the design or an action plan that is to implement some form of amelioration. The fourth stage is to become a means to carry the fruits of the conversation into a mode for participatory action research [12]. In this sense, the conversation design displayed in Table 1 is anticipatory. It is intended to contribute to the betterment of organizational ethics via human inquiry.

The discussion of ethical cases works to sensitize participants to ethical concerns. There is the secondary gain of raising the consciousness of participants concerning practices which may become ethical dilemmas, issues, and problems. Participants seek to take from such conversations choices for action based on the discussion of the cases. Thus, the focus for concluding the conversation is to address the kinds of questions stated in Table 6.

Table 6. Focal questions to conclude the conversation

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| <ul style="list-style-type: none">• From these cases, what can we learned about the use of information systems in our organization?• Should such cases arise in our context, what choices would we have?• Is there a right path of decision and action in these cases for our context?• Are there guidelines and best practices that can minimize the likelihood that such cases would surface in the communications and activities in our organization? |
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Conclusion

This paper has presented a conversation design of four stages for examining organization and research ethics in human activity systems. Even though the examples and cases have centered on information systems, one limited session of conversation, and a small group, the design can accommodate extensions; more general considerations of conversation design ought to be considered. Conversation design is a key element of all practical and group oriented systemic methodologies when applied in human organizations. Although the subject area of this paper has been delimited to ethics of information systems, any subject area of conversation might be tested by means of these formulations.

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