

NOTES

1. This article is adapted from a paper presented at a conference, "Problems of Individual Emergence," at the University of Amsterdam on 20th April 2001.
2. The ISI prefer to use the phrase *Transcendence*. Transcendence here means the ability and willingness of the group to escape from constraints of their current situation to engage in visioning a different future and to start the social system design process.

REFERENCES

- Banathy, B. H. (1996). *Designing social systems in a changing world*. New York: Plenum.
- Banathy, B. H., and Jenlink, P. (Eds.) (In Press). *Dialogue as a collective means of communication*. New York: Kluwer Academic/Plenum Publishers.
- Bohm, D., (1990) In Banathy, B. H. (1996). *Designing social systems in a changing world*. New York: Plenum, pp. 215-218.
- Brahms, S., Dyer, G. C., Horiuchi, Y., Jenks, L., & Rowland, G. (2000). The Y3K solution: Repositing the ideal seeking social systems design. In C. Chroust and C. Hofer (Eds.) *Social systems and the future*. Austrian Society for Cybernetic Studies, pp. 1-16.
- Dyer, G. C. (1996) *Enthalpy: A metaphor for the chemistry of conversation*. Systems Research Vol. 13, 2, pp. 145-157, Wiley.
- Dyer, G. C., Dyer, J., Ferguson, T., Gabriele, S., Johnson, C., Rowland, G., & Ryan, D., (1997). *In Report from the Social Creativity Group: Metaphorming for Systems Designers*, Proceedings of the Ninth International Conversation on Comprehensive Design of Social Systems, (Nov. 1997) Carmel, CA; International Systems Institute, pp. 71-82.
- François, C. (1997) (Ed.). *International Encyclopedia of Systems and Cybernetics*. Munich: K. G. Saur, p. 117.
- Gregory, D. (1993). *Distinguishing G. Pask's cybernetics*. In *Systems Research*, 10, 3, New York: Wiley.
- Siler, T. (1996). *Think like a genius*. London: Bantam.

BANATHY'S INFLUENCE ON THE GUIDANCE SYSTEM FOR TRANSFORMING EDUCATION

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INTRODUCTION

This article is a tribute to the work of Bela H. Banathy. We identify how Banathy has influenced our work on systemic change in education. For Banathy (1996) the crux of systemic change is found in systems design, which is a process that engages stakeholders in conversations on their visions, ideals, values, and aspirations with

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the goal to intentionally create their ideal educational system. Particular attention is paid to how Banathy's theoretical framework has influenced the development of the Guidance System for Transforming Education (GSTE) that we are currently developing (Jenlink, Reigeluth, Carr, and Nelson, 1996, 1998, in final preparation) for facilitating systemic change in public school districts. The GSTE offers practitioners an application of Banathy's ideas.

In our discussion we identify the process *values* and the process *activities* that drive Banathy's theoretical framework, and compare these to the values and activities that we have developed in the GSTE. Process values are the perspectives and beliefs that organize our thinking about design (Banathy, 1991), whereas process activities are the specific events that a facilitator, together with an educational community, would use to create their ideal educational system. Banathy's theoretical framework is the *map* for facilitating systemic change in educational system, and our Guidance System is the key to this map. In any mapping or navigational system, there is always a key that provides the user with the "how to's" to understanding the intricacies of the map. Our key is composed of detailed guidance for implementing Banathy's process values and activities. It is our intention to demonstrate the extent to which Banathy's work has influenced the development of our Guidance System for facilitating systemic change in public school districts.

PROCESS VALUES

Process values are the intrinsic qualities that ground and guide the collective set of beliefs that we share and uphold as we travel through a journey in creating a better educational system for our communities. Whereas values ground our beliefs, in turn, process beliefs define in large part both the nature of what is designed and how it is designed based on the guiding beliefs about process.

Process values provide direction and motivation for the design journey; they are what keep the community together. Without values and beliefs for the process, a

Table 1
Comparison of Process Values

Banathy Process Values (1-4 are from Banathy, 1991, pp. 174-175; 5-6 are from Banathy, 1996, pp. 231 and 238)	The Process Values Underlying the GSTE (Jenlink, Reigeluth, Carr, & Nelson, in final preparation):
1. Commitment to Participation	1. Participant Commitment and Responsibility
2. Commitment to Idealized Design	2. Ideal Design
3. Design is Continuous	3. Event 26: Evolve, evaluate, and revise the new system
4. Nurturing Human Values and Human Quality	4. Caring for children and their future, Respect, Social Responsibility, Social Justice, Community, Creativity, Vision, Collaboration
5. Design Community	5. Community
6. Design Conversion = Generative + Strategic Dialogue	6. Conversation

Table 2
The Full Set of Values Underlying the GSTE

Caring for children and their future	Time
Systematic Thinking	Space
Inclusivity	Participant commitment
Stakeholder ownership	Respect
Ideal systems design	Responsibility
Capability	Readiness
Capacity	Collaboration
Creativity	Community
Self-criticality	Vision
Social responsibility	Wholeness
Social justice	Language
Coevolution	Conversation
Facilitator	Democracy
Process orientation	Culture
Context	

From Jenlink, Reigeluth, Carr, and Nelson (in final preparation)

community will never be able to overcome the many obstacles in a system change effort. In Table 1 we present the process values that Banathy has advocated, in relation to the values at the crux of our Guidance System (see Table 2). Each of these values is discussed next.

Commitment to Participation

This value states that, important to the success of any long-term change effort, is the act of engaging educational stakeholders in every phase of the change process and encouraging their participation. Banathy recommends that stakeholders be invited to help design and implement the change effort, and that we as facilitators should guide and nurture creativity in individual stakeholders. What Banathy (1991) refers to as "Commitment to Participation," we have labeled as "Participant Commitment". In the GSTE, stakeholder involvement requires not only participation, but also critical dialogue surrounding the values, beliefs, and mindsets we hold about education. Together with participation, we believe that it is the *responsibility* of the participants to be committed to the process, and to understand that they are responsible to and with others in effecting change. In the following passage, Banathy (1996) clearly emphasizes the importance of responsibility in designing educational systems:

When it comes to the design of social and societal systems of all kinds, it is the users, the people in the system, who are the experts. Nobody else has the right to design social systems for someone else. It is unethical to design social systems for someone else. Design cannot be legislated, it should not be bought from the expert, and it should not be copied from the design of others. If the privilege of and responsibility for design is "given away," others will take charge of designing our lives and our systems. They will shape our future. (p. 228)

Our goal as facilitators of designing systemic change of education is to empower communities, the users of the system, so that they may assume ownership and responsibility for creating their future systems. To accomplish this goal, community members must become responsible *user-designers*. According to Banathy (1991):

The notion of USER-DESIGNERS is based on the belief that systems design is most successful, it is most viable and productive, and commitments to implementing the design are most binding, when it is directed by the users of the future system rather than by outside experts. (p. 166)

It is extremely important here to distinguish between authentic user-design and the sort of user-design in which users are merely "consulted" but decisions are still made by those at higher levels of organization. There are many stories of such stakeholder roles, which serve to create cynicism rather than responsible action on the part of front-line users (Dareh, 1992). What Banathy is describing in his discussion of user-design is ethical engagement with users in the creation of their *own* systems.

Commitment to Idealized Design

According to Banathy (1996) "in the ideal systems design approach the target is always the ideal. The target cannot ever be less than ideal. Design is a journey toward the ideal" (p. 194). We support Banathy's notion that, for any systemic change process to succeed, it should seek to envision and create an ideal system. This value requires a shift in the way we think about current educational systems. It requires that we intentionally seek to think "outside the box" and ask questions such as: "with unlimited resources, what would my educational system look like?" The people who commit themselves to a process of continual envisioning and revisioning, must be people who "think future—act now" (Banathy, 1991, p. 165).

Designing an ideal system is one of the key process values found in the Guidance System. We should value the ideal, and more importantly we should value the process or the journey we take to forever strive for that ideal. We may never reach the ideal, but it is the dreams and aspirations we share and act upon that will bring us closer to the ideal educational systems we seek to create for our future, for our society, and for our children.

Design Should Be Continuous

Banathy (1991) tells us, "As we move toward the realization of that ideal, the environment and the situational context in which we operate will change" (p. 175). Therefore, as time evolves we will be continually changing and redesigning what we have envisioned to be the ideal. We should not be surprised if we never reach what we envision as our ideal educational system. We should embrace the journey and the process we create to pursue the ideal. Within Event 26 of the GSTE, we clearly state that, "as the new system evolves closer to the ideal, new possibilities and problems will emerge, so it is wise to periodically revisit and revise the ideal design as well" (Jenlink et al., in final preparation).

Nurturing Human Values and Human Quality

According to Banathy (1991), as user-designers we must "consider the system we design to be a human activity system in which human beings are the most valued and are the ones to be served by the system" (p. 175). At the foundation of the GSTE are values that embrace human beings as the most important element of any systemic change effort, and they include caring for children and their future, respect, social responsibility, social justice, community, creativity, and collaboration. These guiding values provide a center (or foundation) to the "guidance system, a center from which to design the systemic change process and a center that mediates the design process to ensure that the ideal created is purposed for all of society" (Jenlink et al., in final preparation). The following is a description of these values, which elaborate on Banathy's focus on valuing human beings in the systemic change process.

Caring for Children and their Future. Valuing and respecting young people and nurturing their development should be viewed as important responsibilities for the community to assume. An ethic of caring and a capacity for caring are essential to the nurturing of children. Therefore, participants should view the purpose of their systemic change effort as being to advance human learning and development within a caring community (Noddings, 1992).

Respect. Respect begins within each participant, and having a healthy self-respect is paramount to being able to respect others. Participants should value the perspectives, concerns, and contributions of all other participants. Respect is essential to working closely with others in change, and it is an important condition for building trusting and open relationships so important to the process.

Social Responsibility. Community members and other participants in the systemic change effort must embrace the responsibility not only for social change within the culture and community, but also for ensuring that marginalized youth and stakeholders are included in the change effort. Social responsibility speaks to the need for addressing issues of diversity as well as seeking to ensure that the collective ideal (set as the guiding point for systemic change) addresses societal challenges and political issues while simultaneously serving to mediate issues of power.

Social Justice. The facilitator and participants in the systemic change effort are the guardians for creating an educational system that is just—a system that recognizes that the underprivileged and marginalized citizens must be included, not only in the design process, but also in the realized opportunities of a better school and a better system of learning. Social justice, as an essential belief in systems design, speaks to deconstructing existing social structures that serve disadvantaged individuals and communities of difference. It represents the most compelling reason for engaging in design.

Community. Community differs from a group or collective team. Whereas groups or teams are used as a means to an end, community is a state of being and becoming

a whole. And having a sense of community, which may be possible with a group or team, is different than being a community. Community refers to an open honesty and deep commitment by people to learn together and make each other's conditions their own. Community in a normative sense of the term, is an association of people, mutually and reciprocally involved with each other, caring for each other, aware of the human effects of their actions upon those within and outside the association, committed to being responsible for those effects. When stakeholders move toward being in a community of action for change, the building of community is a future-oriented process of inquiry to sustain the continued growth of people. Participants should understand the importance of creating and sustaining community as a key to fundamental systemic change.

Creativity. The importance of the spirit of creativity and the generative nature of creativity are central to design—design is creation. Creativity pushes at the boundaries of the current system as well as the boundaries of the human mind. In this sense, creativity is at the center of systemic change. Creativity depends on communication, and communicative action is integral to addressing the challenges facing society (Bohm & Peat, 1987; Banathy, 1996). Enabling all stakeholders to engage in creative acts is a valuing activity that acknowledges the value and worth of individual and collective participation. The generative nature of creativity and the energy of diverse perspectives strengthen the design process, and in turn enhance the “goodness of fit” between the new educational system and the purpose for which it was designed.

Collaboration. Collaboration is a process of sharing relationships wherein participants feel safe in exchanging their knowledge and experience. Collaboration is essential to effecting strong teams and ensuring viable group dynamics. Collaborative relationships are interdependent in the sense that individuals form as collectives with the purpose of effecting the efficient attainment of stated goals. Collaboration can act as a springboard for creating a community of stakeholders who share a common purpose of fundamental change.

These values of the GSTE—caring for children and their future, respect, social responsibility, social justice, community, creativity, and collaboration—reflect Banathy's emphasis on nurturing human values and human quality.

Design Community

Banathy (1996) defines a design community as people with a common interest and purpose to design their system. Banathy further states that the essence of the design community is “the degree of effort they devote to attain the purpose, the degree of their commitment to it, and the degree of their commitment to each other” (Banathy, 1996, p. 231).

It is not naïve to consider that, when respected and empowered, all stakeholders, even those with very different views and values, may come together and work through their differences toward a place of agreement. This can happen in the milieu of a community. Communities share not only interests, but also activities. They are en-

gaged in the generative activities of design and creation. Within these activities comes a sense of commitment to one another, and the single-issue interests with which individuals may arrive at design activities are often laid aside in the hopes of finding a common plan that can move the entire community toward social justice goals. Because this community is made up of those stakeholders who will be primary users of the new system, the design community is the site of user-design activity. The GSTE places considerable emphasis on building a design community.

Design Conversation

Design Conversation is a communicative method “appropriate in pursuing the disciplined inquire of social systems design in groups” (Banathy, 1996, p. 218). The importance of this communicative method, in large part, is its focus on creating an “ideal” of a new system and then enabling the “ideal” to be translated into reality. Design conversation, as Banathy (1996) notes, is a combination of generative dialogue and strategic dialogue that “composes a comprehensive method of social communication that is the most viable to use in a designing community” (p. 218). Generative dialogue seeks to create a “common frame of thinking, shared meaning, and a collective worldview” (Banathy, 1996, p. 215). Strategic dialogue “focuses on specific issues and tasks, and it is applied in finding specific solutions in organizational and social systems settings” (Banathy, 1996, p. 218).

Conversation is central to the GSTE and the activities that comprise it. Design conversation is both method and medium for designing a new system (Jenlink & Carr, 1996). The process of design is premised, in large part, on dialogue and design conversation that ensure inclusive participation of those who are the beneficiaries and users of the system being created. In the context of educational systems design, conversation is:

... viewed largely as a communicative action, providing a medium through which participants in the design process may engage in a multi-dimensional inquiry leading to the creation of a new system. Design conversation is not a singular type or form of social discourse, but rather a dynamic system comprised of different forms of discourse, each with a particular purpose and mediational importance as a semiotic tool in the system design activity. (Jenlink, 2001, p. 352)

The Guidance System is premised on design conversation as a “disciplined inquiry grounded in systems philosophy, theory, and thinking and practice” (Jenlink & Carr, 1996, p. 34). Situating design conversation in the context of educational change, this discourse “focuses on a change that transcends both systemic constraints within the [educational system] and the constraints of a narrow, traditional view of how change should happen” (Jenlink & Carr, 1996, p. 35). In the GSTE, design conversation is the medium for communication as well as the infrastructure that supports and enables the participation of individuals in each of the activities that culminate in the design of a new system.

The various activities in the GSTE are discourse based and require the direct and authentic participation of those individuals who use the system. Importantly, there are different types of conversation that are integral to the overall design process.

