Theme of SF RT meeting:
Integrating Technology and Organization Design

Question One: **What is the relationship between Organization Design and IS design?**

Context:

Information Systems are NOT technologies even though they are so labeled by everyone. The distinction is important because we accustomed to the wonders of technology overcoming the limitations of nature. We extend that belief to IS. The digital world seems enormously plastic with regard to technological challenges. That is because the digital world is not governed by nature; it is governed by human logic, i.e. our capacity to model phenomena. A critical issue is that our logical capacities are limited. Kurt Gödel demonstrated that a system as simple as ordinary arithmetic cannot be perfect and complete, i.e. something can be proven both true and false concurrently. We cannot design programs that can do what any human can do: Project an image of self into space and reflect on ourselves to determine: *Something does not make sense.* Or *I am too drunk to drive.*

Why is that important with regard to Information Systems? They will always need human backup and, given growing complexity, that back up will be by groups or teams. That leads to the agenda of our discussion questions: .*How do we design human organizations that will utilize complex IS to do the organizations work?*

Note: Our discussions are necessarily exploratory. Hopefully, they will enrich the discourse at the SF meeting. **Feel free to pursue your own questions on this topic.**

✍ *What is the relationship between Organization Design and IS design?*

There are many dimensions to this question. The logics and processes of Org Design and IS design differ greatly. In Org Design, we are dealing with many intangibles and the fuzzy relationships between people at work. IS logic requires a clarity and well defined functions that are lacking in most organizations.

Organizing is a process of information about expected behaviors exchanged among people that signals to them that they are "organized." These signals are often quite subtle. Our IS works, doesn't work or is hung up. Much organizing takes place at coffee machines and informal conversations. IS has no equivalent of the coffee break.

Organizations are combinations of formal roles and authority structures and much informal communications. IS may have means for informal communications but they are not allowed to change the definitions of functions and meanings of communications.

Finally, an IS design is an implicit Org Design and, in many ways, an Org Design is an implicit IS design. Yet, each practice speaks a language foreign to the other.

Our question may be rephrased as: *How can IS design support Org Design? How can Org Design support IS design? What are the conflicts between the two? How can an emerging joint practice emerge and develop?*

Question Two: **How do we design participation, autonomy, and effective teamwork under the conditions imposed by IS?**

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✆ *How do we design participation, autonomy, and effective teamwork under the conditions imposed by IS?*

We have long recognized the importance of informal organization and our teams are, in many ways, a method to structure the benefits of informal organizations in org designs. Along side informal organizations were the notebooks and PC computers which were the locus of informal IS by which many operations were actually managed.

It is doubtful that either informal orgs or IS are recognized by the IS community. Indeed, often the charter of the IS design is to get rid of such competing means of managing and organizing. We know they are necessary and will emerge, one way or another.

How can we develop a shared design process that has the capacity to meet the needs of management AND of teams? Or is that even possible?

As social scientists, we believe that people impose meaning on their experiences as a basis for individual or group action. One expectation by upper management is that their large scale IS will impose those meanings on individuals and groups. In their minds, it is a good way to reduce chaos and increase control. Groups, in the trenches at whatever level or part of the organization, will often see different realities. In today's world, they need to share ideas and interpretations electronically. *What kind of IS services can meet those needs without creating conflict in organizations? How can the messages that emerge from their work and shared understandings be communicated up the organization? Upwards communication has always been a challenge. How can IS improve org functioning in that area?*

Assuming a management that is open to significant team autonomy, self-management, and recognizes the conditions for such teams. *What would we request from IS design to support our teams and groups? Do we even know what a team supporting IS should do?*

Question Three: **How can IS be architected to support the continuous creation of knowledge?**

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☙ How can IS be architected to support the continuous creation of knowledge?

Our systems are becoming increasingly complex. The simple work is in machines. The human work is often entirely cognitive. The uncertainties have become the human and organizational challenge. The result is the professionalization of work roles. The key to professions is the creation and codification of knowledge.

The issue, then, is *How do we design IS to support that function?* What we already know is in the "catalog" or the "handbook." The IS is excellent in that function.

How might wikis work in large organizations? What about virtual knowledge teams with particular foci? For technical systems with catastrophic potential, how do we assemble knowledgeable teams? Or how do we build them into our organizations?

A critical problem is always misdiagnoses. We converge quickly and with great energy on the wrong answer. My notion is a Dialectical IS which updates the status of competing diagnoses that have yet to be conclusively rejected. We can always access the "alternative reality."

If knowledge creation will be a critical role in the future, how do we design our organizations and supportive IS to manage that task?