VIRTUAL SYNCHRONOUS ENCOUNTERS OF KNOWLEDGE SHARING AND THEIR IMPACT ON CULTURAL CHANGE

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Abstract

A virtual synchronous discussion group was used as a solution for an urgent business need. It involved new behaviors and new learning methods in the organization. This change evolved into a much larger scale change across the organization, which resulted in significant cultural changes. The case is analyzed from the perspective of continuous change and complexity theory. It is suggested that at the edge of chaos small changes can evolve into greater spirals of change that may affect organizational culture.

Keywords: complexity, knowledge sharing, culture, discussion group.

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Practitioner's track

Introduction

The case of Synchronous Discussion Groups (SDG) is part of a 4-year consulting project that we have been involved in. The details of the case have been gathered through our consultants acting in the organization as internal change agents. As consultants we have our theoretical constructs that guide us in carrying out our roles, however, we find that one of our main contributions to the change process is analyzing the flow of events *after* they occurred, thus, our theoretical analysis is mainly post factum. This view is based on continuous change approaches. The role of the change agent in continuous change, according to Weick and Quinn (1999) is "to make sense of change dynamics already under way. They recognize adaptive emergent changes, make them more salient, and reframe them".

The mission of this paper is to discover meaningful patterns in the flow of micro-changes that took place at a client organization, which will enable us to learn something new for further interventions in this organization as well as in others. But, most importantly, this sense making may contribute to the client organization, and hopefully will enhance further changes in the path taken. Hopefully some new insights of change processes in KM implementation will be of use to other consultants or change agents.

The case deals with an unusual use of a discussion group due to an urgent need of learning in a situation with many constrains and limitation. A discussion group is a social environment based on technology that enables participants to exchange explicit and tacit knowledge. The virtual space of a discussion group allows free, unstructured interactions between the participants (similar in many ways to social encounters) that can contribute to establishing trust, understanding perceptions, attitudes, needs and acquaintance with the informal sides of each other. Most virtual discussion groups are used in an a-synchronous manner: Members of the group enter the discussion group, read the messages or write new ones at their convenience.

The case: How was synchronous discussion group (SDG) invented?

Collaborative KM processes have been implemented in a large financial organization for a few years. The organization operates in a very dynamic, competitive environment, which is restricted by governmental supervision that controls its activities. It's a geographically dispersed organization, with a few hundred branches in the country and about 40 offices all over the world. Most of the KM activities have been focused on the creation and nurturing of communities of practice (CoPs) and Knowledge Services (KS)(40 in total to date). Small teams of Knowledge Leaders comprised of content experts lead both types of KM processes. Each team has a KM consultant who helps promote collaborative KM processes. All the CoPs and KSs have intranet web sites with a variety of tools and services, including a-synchronous discussion groups, as well as various KM mechanisms for capturing knowledge, such as FAQ, Tips (with a matching knowledge tree for each community or KS) and case studies. All these KM tools and processes have been implemented in the organization prior to the event described here.

A-synchronous discussion groups have been used widely in the organization, but not always for pure business needs, and not as a first choice collaborative tool. Discussion groups were perceived as useful at times, but not very efficient.

A business opportunity was identified in one of the CoPs by the KM consultant: A need to implement in a very short period of time a new policy related to financial investments. The most common method for learning new policy and regulations used in the organization up to this occasion was circulation of the new regulations either in hard copies sent to all relevant managers in all the branches or in soft copies published on the organizational intranet.

However, in this case it was clear to the Knowledge Leaders and the consultant that publishing the regulations will not be sufficient. As predicted, many queries arose by worried employees from the branches in their efforts to translate the policy into everyday practices. These queries required an official expert reply as errors had severe legal consequences.

Face to face training was too time consuming, especially in such a geographically dispersed organization. So were other types of face-to-face conferences that the organization had used in the past to implement new policies. Only an a-synchronous

E-learning technology was available for use in the form of short digital lessons.

The Knowledge leader of the CoP and the consultant realized that customizing the new policy to this particular organization involved generating new knowledge; that full implementation would take place only if all problems arising in the branches in their efforts to implement the new policy, found appropriate solutions; and that Head-Quarters (HQ) experts had not yet created these solutions because they did not have all the necessary information about such problems. The knowledge leaders realized that this new yet undiscovered knowledge would be created only in an open discourse between HQ and branches.

A discourse mechanism had been used in the past in the form of an a-synchronous discussion group. But this solution was far too time consuming and not enough business focused for their needs in this case. The Km consultant suggested using the a-synchronous discussion group in a synchronous mode.

The production process

A real time performance on the organizational "digital stage" required some production activities behind the scenes: A preparation process, designing the "on stage" process and casting.

The KM consultant's first step was to sell the idea to the KM leaders of the CoP: They had to understand this opportunity of a fast learning process, as well as the benefits of knowledge creation and capture process using a SDG. Both the leader and some HQ content experts had to be convinced of the advantages of such a solution compared to other more common methods for learning used in this organization. Although these experts were exposed to the use of discussion groups in the past, they perceived it as a voluntary means for conversation in the organization, and not as a tool for implementing a new investment policy. The consultant had to demonstrate in a very

concrete manner that SDG is more than just chatting, so that the experts could visualize the process and its benefits.

Once these experts were convinced of the value of SDG they started planning the process with the consultant: Selecting the experts that would answer the questions on line, determining the appropriate time for the SDG that would allow most of the workers to participate, and methods of promoting this event in the CoP.

One of the major obstacles for success that were identified was the extent of participation in the SDG. It was quite clear to the leading team based on past experience that not all the workers like to "talk textually". Many employees don't feel at ease posing questions especially at the beginning of a discussion group when each question is more salient. It was therefore decided to assign "collaborators" whose role would be to present questions to the experts at the beginning of the SDG, or at any other phase of the event where too little activity could discourage people to participate. These "collaborators" were members of the CoP, usually with experience in digital interactions. They were asked to prepare relevant questions in advance.

The experts were instructed (briefed) before the event on methodology such as: How to lead the discussion group: how to open it, how to present the process and its rules to the participants, how to answer, as well as learning technical skills.

The SDG

For 2 hours at the scheduled time a SDG business related learning content took place. Alert HQ experts answered questions from field employees. The KM consultant was responsible for enhancing the process: When participation was too sparse she phoned the "collaborators" to present their questions. At times when the experts were overwhelmed with too many questions the consultant advised them to "buy time" requesting the participants to refrain from asking questions for a few minutes, whilst two experts answered the questions at hand. This kind of support was very useful, especially at the 2 extreme points of either too little or overwhelming participation.

Statistical data of participation in the SDG showed about 15% active participation out of the total number of expected participation (about 300 members of the CoP). Many workers chose to participate passively. However, the active participants supplied enough questions that covered most of the problems that the branches encountered in the implementation of the new policy. Some of the learning was generated during the SDG, but much more learning was done at the following weeks through the new knowledge base that was the result of this SDG.

Information processing

At the end of a 2-hour SDG session there was a large repository of unorganized and unstructured questions and answers. The experts and the knowledge leader who participated in the SDG produced a well-structured FAQ comprising of the questions that branch employees had asked and their answers, as well as other information that the questions helped to recognize as relevant. The answers had to be confirmed by the whole team of experts, and thus became the official knowledge of the organization.

The outcomes

   a. *Immediate products*

      1. The new investment policy was efficiently implemented.

      2. Experts created new knowledge dealing with problems that the new policy produced for the branches.

      3. The event was a positive experience of knowledge sharing and established another milestone in a collaborative culture.

   b.   *Longer term results*

      1.   In a matter of a few months SGD was established as a fast and efficient learning and implementation process as well as a convenient method for a 2-way discourse between HQ and field employees. This was due to the

fact that most CoPs and KSs in the organization were open to all employees, which promoted cross-organizational learning and dissemination of new ideas.

2.   A new understanding of how learning should take place in the process of implementing new regulations or new work methods was acquired. Whereas before this occasion the approach was sending written materials by HQ to the branches, the new methodology was mutual learning between HQ and branches through discourse.

3.   The mass (over 200 within 1 year since the first SDG) of discourse events between HQ and field workers has gradually developed into a significant change in organizational culture. Knowledge sharing (especially tacit knowledge) has become more than a buzzword, it is actually taking place and quite often.

What changes took place in the organizational culture?

To appreciate the cultural change fully, one needs to understand the type of organization it was prior to this cultural change and still is in many respects. This is a very old organization, with strong values of conservatism, stability and reliability; a prevailing perception that HQ is the source of knowledge, which is transferred top-down to the branches. For regular workers to be able to directly speak to the head of a division it was "like speaking to the president of the United States" as described by one of the consultants. Yet just 1 year after the first SDG an open discourse between the head of a division and field workers in the form of a SDG took place. HQ initiated more and more SDGs in order to be able to discuss business with field workers. They realized that some critical knowledge resides at the bottom of the organization, in the heads of regular workers.

Were there no tumbles? Of course there were. It takes time for both management and branches to learn new skills and to change deep embedded attitudes. A typical tumble would be intimidating responses to questions asked by branch employees, during a

SDG. For example: In response to a branch manager who did not understand the rational of HQ policy, the executive response was: This is how it's done here, and if it isn't clear to you come to my office and I'll explain it personally to you"…

Attitudes were not easily changed either. In a conservative hierarchical organization governed by structural work procedures, textual talking, in a free, unstructured mode, could intimidate top management. It was perceived sometimes as subversive behavior, or merely a waste of time, refuting prevailing cultural values.

Another fear of the executives was that uncensored and unauthorized professional information would be widely dispersed with no quality control, and would be mistaken for authorized information.

Other problems in carrying out SDGs occurred when the subject chosen for the discussion was not urgent or relevant enough for the workers, or when not enough marketing and promotion was done as part of the preparation for the SDG.

In spite of these difficulties a significant change in learning and implementation procedures and knowledge creation methods has occurred, which enhanced new cultural values of knowledge sharing and collaboration.

Theoretical background

We have chosen some guiding themes that will help us in the process of sense making:

1. Continuous change vs. planned change

The continuous change view of organizational change (Weick & Quinn, 1999) is a leading construct in our consulting practice, especially in KM change processes (Orlikowski & Hofman, 1997). Planned change approaches, adopted widely by Information systems, rely heavily on Lewin's (1958) model of change (unfreeze-change-freeze). This model implies that the process of change is sequential, dramatic, can be anticipated and is a quantum leap. Continuous change approach, on the other hand, assumes that change is emergent. Small continuous adjustments, created simultaneously across units, can cumulate and create substantial change (Weick&Quinn, 1999).

Another theoretical model that is relevant to our case study is Orlikowski and Hoffman's (1997) improvisational model of change management. The two assumptions of this model are: a. Technology implementation is an on going process. b. There are many unplanned changes that occur in the implementation process that cannot, by definition, be anticipated. Based on these assumptions the authors suggest three types/phases of change process:

1. *Anticipated change*: changes that are planned ahead of time and occur as intended.

2. *Opportunity-based changes*: changes that are not anticipated ahead of time but are introduced purposefully and intentionally during the change process in response to an unexpected opportunity, event, or breakdown.

3. *Emergent changes:* changes that arise spontaneously from local innovation and that are not originally anticipated or intended.

Orlikowski & Hofman (1999) suggest that there are enabling conditions that must be fulfilled as a precondition for the adoption of the improvisational model: First, dedicated resources must be allocated to provide ongoing support for the change process. The second condition is the interdependent relationship between the organization, the technology and the change model. There should be an aligned relationship between these dimensions.

Two central issues that need to be dealt with, when viewing change as continuous process are: Continuity (culture) and scale (impact). Culture is what holds the trail of micro-changes together, allowing it or preventing it from happening; whereas scale relates to creating organizational impact based on continuous micro-changes.

2. Culture in continuous change perspective

KM processes often involve changes in organizational culture the prevailing value of "knowledge is power" is replaced by values of "knowledge sharing and collaboration". This kind of change is considered the deepest and the most difficult of all change processes in organizations. From a continuous change perspective changing organizational culture does not mean replacing the existing culture. On the contrary, culture is what holds together the micro changes, so if one expects these small changes to become big ones culture has to persist, culture has to connect the past to the future. A paradoxical intervention approach is recommended here (Watzlawick, Weakland & Fisch, 1974): In order to change the organizational culture we need to reaffirm it, to act upon its prevailing values. This is based on the assumption that cultural values are not coherent. Therefore it is possible to promote some values while replacing others, or adding new values.

Culture can also be perceived as the vehicle that preserves the know-how of adaptation (Weick & Quinn, 1999), as stated by Colville Dalton & Tomkins (1993: 559): "If we understand culture to be a stock of knowledge that has been codified into a pattern of recipes for handling situations, then very often with time and routine they become tacit and taken for granted and form the schemes which drive action".

3. Scale: The impact of change on the organization

Scale can be achieved if out of these on going micro-changes new patterns emerge, patterns that are clear to the organization, patterns that matter, that make sense and make a difference. These new patterns and behaviors need to have an impact on the organization if they are to be adopted and recognized widely. Organizational impact requires, according to Kotter (1996), an unequivocal short-term accomplishment perceived by a large group of people who can see the results of this accomplishment and understand how they relate to the change process. In other words events that have an impact in the short term are shaped and created out of the stream of ongoing micro-changes.

4. Change at the edge of chaos

However, often small changes do not make a difference. Complexity theory predicts that small changes will make a difference only if they are performed at the edge of chaos. Thus, systems that are stable do not change. Chaotic systems on the other hand are too formless to coalesce and organize for a change process. Generative complexity takes place in the boundary between rigidity and randomness" (Pascale, 2001).

The edge of chaos, or "bounded stability" (Weick & Quinn, 1999), is not just the mid point between stability and chaos. "In the organizational world, the edge of chaos is where complicated behavior such as both innovation and execution, and self-interest and collective behavior emerge." (Eisenhardt & Bhatia, 2000). . Change emerges, according to complexity theory, under conditions of bounded stability, where opposing states are held simultaneously.

5. Leadership in KM

If change is emergent then why do we need leaders to lead these change processes? Apparently there is no need for leadership from a continuous change perspective. Our view is that the bottom-up processes of emergent changes have to be supported by top-down leadership. Especially in organizations that value top management

leadership, where the structure of power is hierarchical, and where employees seek guidance from such leadership.

Knowledge sharing processes require specific roles of leadership, such as:

The champions: The executive with authority, budget, and the power to enforce

rules and compel behaviors.

*Knowledge-Assets owners: R*esponsible for content, affirming that it is important and that it is correct. Asset owners are practice leaders, and might be functional managers (Stewart, 2002).

Sense making

One of the first questions we asked ourselves, based on our experience that changing organizational culture is almost impossible was – why did it work this time? Why did the SDGs enhance a change in culture in this organization?

Another question we asked ourselves was: Why did a-synchronous discussion groups (ASDG) that have been in use in this organization for some time not catch on as well as the synchronous ones (SDG)?

Examining both types of discussion groups in the same organization, will allow us to assume that differences in use and outcomes are due only to factors related directly to each type of discussion group and not to differences in contextual variables (such as different culture, different leadership or work procedures, or even differences in the type of population that used the discussion groups). We assume that the contextual variables are the same for both types of discussion groups. Even from the point of view of implementation experience, there are some relatively new ASDG that were established within recently formed CoPs, and they are similar to the other ASDGs that were created a few years earlier.

We shall try to answer these questions, using the theoretical themes proposed in the previous section.

The emergence of the first SDG was the result of an organizational necessity. It is very similar to Orlikowski & Hofman's improvisational change model second type: Opportunity-based change. A strong business need, with no existing solution led the KM consultant to innovate: The use of an existing mechanism in a different format, more suitable for the situation at hand.

This solution could not have been carried out if this organization had not gone through the *anticipated change* phase of implementing ASDG prior to the use of SDG. Had the skills involved in participation in a discussion group not been learnt before the SDG this solution would not have been appropriate for that specific situation where time factor was crucial.

The flow of SDGs that mushroomed thereafter was completely unexpected. Other knowledge leaders from other communities felt it could serve some of their needs too, and they went ahead and applied it. The intervening variable that enhanced this cross-organizational learning was the team of KM consultants that briefed each other on a regular basis, and in the case of SDG learned how to produce a similar process to the first successful SDG. As Colville & Dalton & Tomkins (1993: 559) stated this was: "Knowledge that has been codified into a pattern of recipes for handling situations…. become tacit and taken for granted and form the schemas which drive action".

The SDG has served various needs in the organization, and extended its uses. But the most persistent feature, that has not changed yet is the use of SDG for discourse between HQ and field workers in the branches. This in itself is a meaningful change in culture values. We interpret it as a changing attitude of HQ to learning in this organization due to a new realization that there is much to be learned by HQ from ordinary employees in the branches. The understanding that interaction between HQ and field workers can produce new important knowledge for all contributes to the organization's ability to compete at the edge.

We believe that the attitude change had to occur on a critical business issue. Seeing fast business results enhanced theses new attitudes. This is what made the difference between ASDG and SDG: There were important discussions in many ASDG, and knowledge leaders of the communities captured this knowledge and structured it in friendly FAQ, but this did not have the same impact as the SDG.

There were some additional factors that contributed to the difference between outcomes of ASDG and of SDG:

1. The SDG was chosen to satisfy a learning need of a whole community, whereas the ASDG served as means for individual or small group of participants to close their knowledge gaps. In other words, when a knowledge need of a whole community (of a few hundred workers) is satisfied publicly it has a significant impact on the whole organization. Whereas when some people get an answer to a question they asked in a ASDG – it's important for them, but it hardly has an immediate impact on the organization.

2. From the point of view of complexity theory we find that the SDG was acting more at the edge of chaos than the ASDG. The first event was a stressful situation in which the organization had to implement in a matter of a few weeks new regulations to all its branches with heavy legal consequences for errors. None of the existing learning tools was satisfactory, either for its lack of effectiveness or due to the long time it required. It was also a new type of organizational communication behavior departing from existing norms: An open discourse between HQ and branches. This creates a tension best referred to by the term "bounded stability" (Weick & Quinn, 1999) instead of the prevailing top-down pattern of communication.

3. Learning requires a context of trial and error, abstaining from evaluation, an atmosphere of inquiry, of legitimacy for not knowing, learning goals rather than performance goals (Elliott & Dweck, 1988). This is the kind of setting the SDG supplied: Experts from HQ invite branches to ask questions, which legitimized "not knowing". It means that HQ expected that on a new complicated subject such as the implementation of a new investment policy there should be yet unsolved problems. Furthermore, the experts themselves

asked questions, meaning that some knowledge resided at the bottom of the organization. The branches are treated respectfully for their knowledge.

On the other hand, in the ASDG this climate of learning goals has taken a long time to establish. When asking a question related to one's job on any subject there was always the danger to be singled out in your own community for asking trivial questions. You might expose yourself as ignorant. At the SDG The subject dealt with was such that most of the community did not know much about, which created the climate of learning as opposed to performing.

4. Another success factor of the SDG is the fact that it worked within the prevailing culture values and organizational norms:

   1. Time is money

   2. Work is above all (no time is wasted on chit chat)

   3. Official Knowledge resides at the top (HQ)

   4. Output oriented (no time for long processes, focus on outcomes)

   5. High respect for organizational hierarchy

The SDGs' original goal was to allow top experts (from HQ) to answer questions of employees from the branches. The current value of "official knowledge resides at the top" was widely accepted and respected at the start. While talking to the branches HQ experts learnt a few things about the knowledge needs of the braches, as well as the opportunity to collect some new information about the problems the workers dealt with when they tried to apply the new policy. HQ gave legitimacy to this new form of learning and opened a channel for 2-way communication that they have experienced at the first SDG: more equal, mutual learning process between HQ and branches.

It is worthwhile noting that the SDG was short (2 hours only), so no time was wasted, and it dealt purely with business matters. Employees were minimally distracted from their on-going work. Tangible outcomes of the process (a

structured FAQ), added to its business advantage and were highly aligned with prevailing values

As mentioned earlier, in a paradoxical way, out of the existing values emerged new, even different values: A sacred value of respecting hierarchical order was replaced by open discourse between HQ and Field workers, and this in turn enhanced further knowledge sharing and collaboration values; in addition, some new respect for knowledge that resides at the bottom of the organizational hierarchy was established.

The ASDG functioned differently, messages sent by community members some times were not directly related to the business, several executives perceived it as a waste of time, and although some of the knowledge that has been accumulated in the ASDG was regularly transferred to a FAQ, building it was gradual, with no dramatic events to promote it. The outcome of the ASDG is much less clear and less noticeable than the product of a SDG. Thus, this activity represents in the perception of workers and management values that are directly in opposition to current values: It is perceived as marginally important for performing the work, and it takes a long time to recognize its outcomes.

5. Leadership is another important factor that contributed to the success of SDG. Leadership exists in both SDG and ASDG, but it was much more noticeable at the SDG. The leaders had a 2-hour session in which they were in direct contact with many of their community members; they were acting "on stage". Champions, executive with authority as well as the knowledge experts (Stewart, 2002) were there to lead the SDG. They were deeply involved in the process, which probably helped to change the existing attitudes towards discussion groups: It was not perceived as a waste of time, and it was an important business process otherwise these leaders would not feel the need to participate. The leaders "walked the talk", and by doing so changed a few norms in the organization.

In the ASDG the involvement of leadership is much less salient. The experts are there, some of the knowledge leaders of the community are perceived as leaders, but their leadership is quiet, behind the scenes most of the time.

Table 1: A summary of Synchronous (SDG) vs. A-Synchronous (ASDG) Discussion Groups

Dimension	ASDG	SDG
Improvisational model for change.	Anticipated change.	Opportunity based change (the first SDG) + emergent change (further SDGs that followed the first one).
Bounded stability (edge of chaos).	Low, more stable.	High (conflicting values, conflicting learning practices, high pressures from the environment).
Culture	Mostly in opposition to existing values.	In alignment with existing values at the beginning, gradually new patterns of useful behaviors change some values.
Scale (impact): Salience & visibility Relevance to business Focus on tangible outcomes Immediacy of outcomes	 Marginal Medium Low-medium Low-medium	 High High High High

Learning setting	Medium-low	Medium-high
Leadership	Behind the scenes mainly.	On stage, exemplifying new behaviors and values.

Conclusions

We have illustrated in this paper an organizational change process from the perspective of continuous change and complexity theory.

Out of the sense making process of the organizational change some insights have emerged:

1. Change in behavior can develop into a change in organizational culture if:
    a. Leading actors participate in the new process and exemplify the new behaviors.
    b. The new behaviors relate closely to the business and show tangible results and clear advantages.
    c. The new behaviors have organizational impact, possibly by using collaborative technology to establish a public stage for experimenting with new behaviors.
    d. The new behaviors occur at the edge of chaos: where great pressures and contradicting values have to be dealt with.

2. Organizational consulting in collaborative knowledge processes involves acting at the edge of chaos:
    a. We don't necessarily plan, or help others plan for the long term.
    b. We rather act in small recursive spirals that sometimes trigger bigger change spirals.
    c. We don't have a clear vision of the end state of a change process.
    d. We understand the general direction.
    e. We recognize opportunities for change and encourage the organization to leverage them.

> f. We are not just consulting; we are more deeply involved with the client organization, learning together how to enhance new processes at the edge of chaos.

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