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# Towards a Human Processual Approach of Business-IT Alignment

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## ABSTRACT

This study answers the question whether human processual interventions are used to improve business-ICT relationships and if not, what the reasons might be for this. Human processual interventions are about improving human relations and match the problem of troubling relationships between IS and business with its associated miscommunication, unclear responsibilities, leadership issues or perceived cultural differences better than *techno-structural interventions* (pertaining organizational structures, business processes, alignment models, infrastructures, etc.) that are mainly put forward in the literature. Our explorative qualitative research shows that consultants recognize the human relations nature of alignment but that they have different reasons for being inclined towards techno-structural interventions. These reasons provide a mirror to the academic community. We argue that these reasons reinforce the social structure in which many IS people work and that academics are an important group to break with that structure. To this purpose, an adoption of human processual approaches is recommended.

### Keywords

Business IT Alignment, Human Processual Interventions, Organizational Development, IS Leadership, Qualitative Study

## INTRODUCTION

Information Systems (IS) leadership and its relationships with other organizational areas is an important issue in many organizations and has received much attention in the IS literature during the past decades. It is assumed that these relationships resemble "a troubled marriage in need of guidance" (Ward and Peppard, 1996) and that Business-ICT alignment is one of the most prevalent challenges in IS leadership (Chan and Reich, 2007; Hirschheim and Sabherwal, 2001; Preston and Karahanna, 2009; Peppard, Lampert and Edwards, 2000). Ever since Henderson and Venkatraman (1993) introduced their strategic alignment model, a vast array of studies on the concept appeared which have been summarized recently in an annotated overview (Chan and Reich, 2007).

The concept of alignment is not without critique. It has been criticized as being a rational top-down approach (Simonsen, 1999), only partially effective (Chan, 2002), lacking practical handles (Sauer and Burn, 1997), denoting a variety of things (Hussain et al, 2002), being unclear how to achieve it (Sabherwal and Chan, 2001), being harmful (Ciborra, 1997) and being highly romantic, reconfirming organizational differences, shaping social distances instead of solving them and reinforcing the mechanical image of IS and its leaders (Maes and De Vries, 2008).

Despite the fact that the troubling relationship between IS and other business units is often put forward in sociological and social-organizational terms (*a troubled marriage*); misalignment is hold to be caused by miscommunication (Coughlan, Lycett and Macredie, 2005); and recent empirical work shows that shared understanding is a significant antecedent of alignment (Preston and Karahanna, 2009), the IS literature mainly puts forward solutions in what the organization development (OD) literature denotes as *techno-structural interventions* emphasizing the design of socio-technical systems and pertaining (governance) structures, technologies, business processes, alignment models, architectures etc. (Nicholas, 1982; French and Bell, 1990; Cummings and Worley, 1997). Although such interventions might be meaningful, these are just one category of interventions possible in organizations. The other large category concerns *human processual approaches* encompassing interventions that address the improvement of communication and collaboration and increase recognition of opportunities (Nicholas, 1982; French and Bell, 1990; Cummings and Worley, 1997). Both categories of interventions are taken into account in the OD field, which has grown into a comprehensive field with organizational change and learning as

its main themes and with psychology, human relations/social psychology and organizational behavior as its reference disciplines (Boonstra, 2004; Cummings and Worley, 1997; French and Bell, 1990). This raises the question whether a human processual treatment of the issue might offer an alternative direction for solutions. Or to put it differently, why wouldn't we treat the problem of misalignment and troubling relationships in the social-organizational terminology in which it is conceived?

We view alignment in terms of human relations, in terms of the extent to which the agendas and interests of involved actors could be reconciled (Braa, Monteiro and Sahay, 2004), in terms of organizational learning in which IS people learn to understand business people and in which business people learn to understand the opportunities and drawbacks of applying ICT and the needs of IS people to do so. Such reconciliation of reciprocal and often conflicting interest embraces different forms of interaction between people involved (Horovitz, 1999). Such interaction is concerned with aspects covered by social science approaches to organizational life, like the understanding of each others' domains and values, organizational communication, organizational politics and power dynamics, organizational learning or organizational culture (Boonstra, 2004). We like to emphasize that in such approaches differences between people, their aspirations, their roles and their values and beliefs are taken as a fact of organizational life, as something that requires continuous adjustment and is a source for innovation and change, instead of a disruptive factor. So, we don't adhere to the implicitly regularly held belief that alignment is a desirable outcome to arrive at, an end state in which all involved uniformly look at issues and deal with them. To us differences between people and groups of people are not a state of 'mis-alignment' which could be solved by techno-structural changes but a fact of organizational life that needs ongoing attention for which human processual interventions are more likely instruments as these are targeted towards the improvement of communication and collaboration and towards increasing recognition of opportunities that have these differences as its source.

This study answers the question whether human processual intervention approaches are used to improve business-ICT relationships and if that is not the case, what might be reasons for it. We do so in an explorative, empirical fashion. A genuine conceptual paper would stay somewhat suggesting, just showing what the OD field could offer the IS field when it comes to the alignment issue. On the other hand, we find it too early to design a large empirical study as the usage and effects of human processual approaches to alignment haven't been addressed much in the IS literature and business-ICT alignment is not an issue covered by the OD field. This leaves an explorative approach as the most viable option. In the next section we discuss how alignment is generally approached in the IS literature. Following some suggestions in this literature that point into the direction of OD approaches, we introduce typical human processual interventions from the OD field that we expect to be of value to better align interests of business and IS groups in organizations. Then we present the methodology of our study. In the next section we discuss the results of our qualitative data analysis. The data shows that the majority of interviewees are well aware of the importance of socio-organizational interventions, although they do not actually use these. The interviews gave us novel insights into the underlying incentives to prefer usage of techno-structural approaches and we found four reasons why actual deployment of human processual interventions is inhibited. We finish the paper with conclusions.

## THE PREVALENT TECHNO-STRUCTURAL TREATMENT OF ALIGNMENT

Henderson and Venkatraman's (1993) Strategic Alignment Model (SAM) in which they discussed the issue in terms of aligning business strategy to business processes and infrastructures, ICT strategy and ICT processes and infrastructure, has become very influential in the field, not only in putting forward an issue that remained on the agenda for a long time but also by implicitly defining the techno-structural terminology of how to remedy the issue. Ever since, alignment has been generally dealt with in this terminology as becomes clear from Chan and Reich's (2007) overview of the alignment literature.

As alignment models developed, a strand of research to assess and validate alignment (models) emerged. Luftman (2000) for instance, proposed an assessment tool, the Strategic Alignment Maturity Model to identify the factors that strengthen the alignment between business and IT. For the same reasons, Fisher (2004) presented a model that provides indicators to assess the capabilities of organization and the state of its maturity. Maturity models like these assess organizations in techno-structural terminology like strategy, processes, governance, IT, competitive pressure and the like. Even a concept like 'people' generally is defined in human capital-like terminology (rather than in terms of human behavior). The same is the case in another widely accepted approach to improve alignment: enterprise architecture. The Zachman framework (Zachman, 1987) is one of the earliest enterprise architectural frameworks and has become influential in research on the relationship between architecture and alignment. Based on Zachman's framework, several publicly available approaches have been put forward, like the Open Group Architecture Framework, the Department of Defense Architecture Framework, the Federal Enterprise Architecture (Linström, Johnson, Johansson, Ekstedt and Simonsson, 2006), IEEE's 1471-2000 standard for conceptual foundation of architecture and Archimate (Lankhorst et al, 2005). The main premise of these approaches is that by techno-structurally describing strategy, business processes, information (systems) and technological infrastructures, one

could align business strategy with ICT means. Another line of research tries to prove a relationship between alignment and financial performance like net-margin, market share, revenue growth, ROI, cash flow or profitability (Strassmann, 1999; Chan, Huff, and Barclay, 1997), again in techno-structural terminology (e.g. financial measurement systems). Moreover, empirical studies on antecedents of alignment are frequently stated in techno-structural terminology as well, like formalized strategic planning (Reich and Benbasat, 2000; Teo and Ang, 1999), planning sophistication (Chan, Sabherwal and Thatcher, 2006), IT department's reliability (Teo and Ang, 1999), IT implementation success (Reich and Benbasat, 2000), shared domain knowledge (Reich and Benbasat, 2000; Chan et al, 2006), etc.

## HUMAN PROCESSUAL APPROACHES TO ALIGNMENT

Despite the prevalence of techno-structural interventionist approaches in the IS literature, some of the literature points into the direction of human processual approaches. Chan and Reich (2007) differentiate the classical school and the processual approach. Above mentioned approaches belong to the classical school, while what they call the processual school coincides with what we denote as human processual interventions. However, their overview remains restricted to acknowledging that alignment is a process instead of an end state, that it could be measured over time and that patterns might be discovered and that the process of alignment is about communication, collaboration and relationships. Their comprehensive literature review doesn't shed much light on human processual interventions. Other pointers in the direction of human processual approaches are for instance Reich and Benbasat (2000), who suggested that in addition to studying artifacts such as plan and structures, one should investigate the content of the players' mind, their beliefs, attitude and understanding of these modeling artifacts. Horovitz (1999) concluded that alignment is best understood along two dimensions: the intellectual processes including methodologies and tools and the social processes that focus on people's behavior. Chan (2001) suggests improving the informal organization and in a recent empirical study, Preston and Karahanna (2009) used constructs like shared understanding, shared language and social systems of knowing.

Figure 1 shows the organizational iceberg model that is well known in the field of OD. This model visualizes the duality of formal and rather overt aspects of organizations (e.g. techno-structural aspects such as tools, models, structures, technology, etc.), and the informal, rather covert behavioral aspects (e.g. attitudes, beliefs, interactions, group behavior, etc.) (French and Bell, 1990).

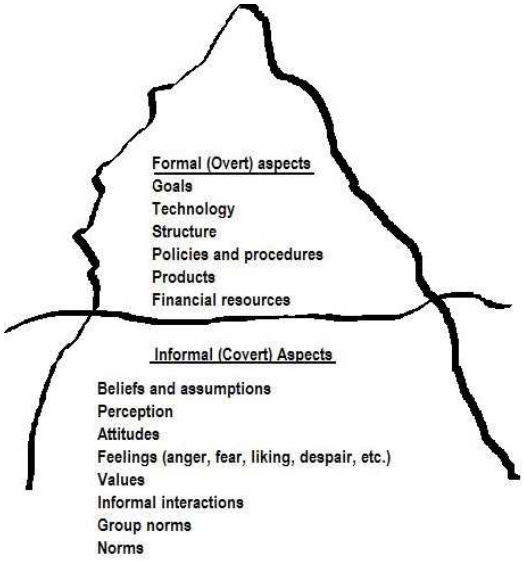


**Figure 1 Organizational Iceberg Model (French and Bell, 1990)**

The OD field acknowledges both aspects of organizations but emphasizes intervention approaches directed to the behavioral aspects of organizations, as these are hold to be the main drivers, the most enduring and therefore the hardest to change (Huse and Cummings, 1985). The OD field can be defined as: "A top-management-supported, long-range effort to improve an organization's problem-solving and renewal processes, particularly through a more effective and collaborative diagnosis and management of organization culture -with special emphasis on formal work team, temporary team and inter-group culture- with the assistance of a consultant-facilitator and the use of the theory and technology of applied behavioral science, including action research" (French and Bell 1990; pg. 17). Many aspects of this definition pertain to business-ICT relationships as well (like problem-solving and renewal processes, different group cultures, effectiveness of work teams) and the many human processual intervention methods put forward by the OD field seem promising. An intervention is one or a

set of planned change activities intended to help an organization in achieving its goal (Cummings and Worley, 1997).

For this study we selected a number of human processuel interventions that look relevant to improve alignment. The selection has been based on the following three criteria:

- The intervention should be targeted at the organizational, inter-group or inter-personal/group level. So, for instance, interventions like "personal development program", in which the focus is merely on personal development, are excluded.
- The intervention should be recommended repeatedly in different organizational behavior literature, providing indication of general acceptance by the field
- The intervention should minimally overlap with other selected interventions.

A comprehensive description of all selected intervention methods is beyond the scope of a paper like this. We selected the following human processual intervention methods.

- Sensitivity training (T-group) (Cherrington, 1989)
- Team Building meetings (French and Bell, 1990)
- Responsibility charting (French and Bell, 1990)
- Work with agenda (Caluwé and Vermaak, 2003)
- Confrontation meeting (Caluwé and Vermaak, 2003)
- Finding a common enemy (Cherrington, 1989)
- Conflict resolution meetings (Cherrington, 1989)
- Organization Mirror Interventions (French and Bell, 1990)
- Survey feedback (Cherrington, 1989)
- The Force Field Analysis Technique (French and Bell, 1990)

We describe three of these to provide an idea on the characteristics of human processual interventions. A *conflict resolution* meeting is a strategy for resolving intergroup conflict. It gradually brings the groups together to share feelings and to engage in joint problem solving. Each group describes its feelings about the other group and indicates what they think the other group is saying about them. After sharing these descriptions, the groups move toward a joint problem solving session. The groups should not be brought together in open discussion until they are ready to focus on the issues without having to defend themselves or blame one other. In a *confronting meeting* all the intelligence and insights of the organization will be mobilized in order to identify problems and to determine and prioritize actions. Different perceptions will be gathered and the aim is to discuss, to negotiate and to compromise the issues. In a *survey feedback*, the first step is a survey to assess the opinions of employees on important organizational bottlenecks. The second step is reporting this data back to members of the organization to allow them to analyze, interpret and use it for designing corrective actions participatory.

## METHODOLOGY

### Choice of research objects

As consultants are regularly involved in alignment issues and as a study conducted in top 500 companies showed that organizational change and development is the highest ranked management discipline as the underlying reason for using consultancies (Clark and Fincham, 2002) (see table 1), we decided to interview senior management consultants from different internationally operating consultancy firms. The interviewees were in charge of the first critical stage of the consulting process: entry and contracting. During initial contact(s) with the client, the senior management consultant sketches an abstract picture of clients' requirements and offers appropriate consultancy services (i.e., strategic, organizational and/or technical services).

| Management disciplines | Number of firms using consultancies | Number of firms with in-house staff experienced in this field |
|---|---|---|
| Organization change and development | 52 | 62 |
| Information technology/systems | 42 | 52 |
| Market research | 37 | 49 |
| Personnel and HRM | 36 | 66 |
| Strategic planning | 31 | 57 |
| Legal | 29 | 63 |
| Marketing | 24 | 47 |

| | | |
|---|---|---|
| Environmental | 18 | 53 |
| Production/services management | 14 | 60 |
| Financial management | 13 | 90 |
| Financial/administration systems | 12 | 85 |

**Table 1. Use of consultancy (Clark and Fincham, 2002)**

### Data collection and analysis

Data is collected through six in-depth semi-structured interviews. All interviews were tape recorded and transcribed. Interview data has been processed through open coding, axial coding and selective coding (Strauss and Gorbin, 1990). Through axial coding the relevant elements of data were distinguished. Selective coding has been applied to correlate the core or central category to all other categories. Data and codes have been reduced and restructured through a hieratical code-tree, helping us to find recurring aspects.

The interviews have been structured so that the subjects were not directed towards certain types of interventions. We divided the interviews into three phases. First, the interviewees were asked to express their experience with alignment in order to reveal the interviewee's interpretation of causes of the problem. In the second phases, different interventions ranging over interventions directed towards strategy formulation, organizational structure, ICT processes and governance, human resource management, business-ICT relationship, communication and human processual interventions were discussed. We asked the interviewees to estimate the perceived effects of such interventions to find out how they would intervene in practice. Finally, we asked them about the congruence between what they deemed as causes of misalignment (step 1 of the interview) and their estimation of intervention effects (step 2).

## DISCUSSION OF THE RESULTS

About 50% of all causes of misalignment mentioned by the interviewees had to do with communication difficulties, poor joint decision making, unclear responsibilities, poor social relationships, leadership issues, perceived cultural differences and differences in expectations about the meaning of ICT for the organization. These are all problems at which human processual interventions are generally targeted. The remaining 50% were techno-structural of character. The interviewees, however, showed incongruence between the causes of misalignment and how they thought about the perceived effects of interventions. They assigned much higher rates to techno-structural interventions than to human processual interventions. Asking them about this incongruence gave us valuable insights into the underlying reasons. Table 2 comprises four general reasons which we categorized along two dimensions.

- *Intentional vs. unintentional*; reasons for choosing techno-structural interventions might be intentional or unintentional.
- *Intrinsic vs. extrinsic*, the inclination toward techno-structural approaches can be bound to the consultant him/herself or might be enforced by the external factors.

| | Intrinsic | Extrinsic |
|---|---|---|
| Intentional | Business process-centric | Customer-centric |
| Unintentional | Character-driven | Environment-driven |

**Table 2. Reasons to choose for techno-structural interventions**

### Character-driven

*"IT driven consultancy agents see, think and act in terms of systems and processes and are strongly content-driven ...which is a completely different language..."*

Some interviewees emphasized to the impact of the personality and background of the consultant. They believe that mostly rational, formal and technologically minded people are attracted to ICT consultancy. Even in senior positions, they might not have shaken off their *intrinsic* (or could we better say *instinctual)* tendency towards techno-structural worldviews.

*"...go to the very essence of the consultant as a human being, is he or she more socially minded or rather mathematical... ".*

*"Unfortunately, we could still recognize technically minded introvert consultants who have to act extroversively..."*

**Business process-centric**

Many consultants understand and meet socio-organizational needs through the notion of designing and managing business processes.

*"...It's about business processes...so questions such as how you deal with your people should be answered from a processes' perspective."*

*"...everything is processable, we could even create a process for the social aspects..."*

*"...there are sufficient possibilities to deal with the soft issues with process-based tools..."*

This is the techno-structuralist's interpretation of human relations. The idea is that if you design business processes, tell people what to do and manage this as a cybernetic system, people will act accordingly and all problems of communication, power asymmetries, organizational politics and different beliefs and values will vanish. In such an interpretation, only the tip of the iceberg exists as this is the only part that is visible. In fact, this is a Tayloristic, Fordian way of looking at the world without acknowledging any progress that has been made in the field of organizational behavior, organizational development, social-psychology and sociology.

**Customer-centric**

*"...block 1 and then block 2, a circle around it, we're done! Now you just have to realize it, folks! Follow up the model and everything will be fine!...That is what clients are searching for..."*

Consultants intentionally utilize models, frameworks, best practices, etc. in order to realize alignment. Consultancy agents *deliberately* use such techno-structural tools as the *admission ticket* to gain entry to the client. The agent completely adapts to the clients' wishes. As clients are expecting concrete models and processes, partly because consultancy firms advertise these as their working methods, the rather intangible and unperceivable human processual interventions vanish into the background. This would no have to be the case, as human processual interventions could still be combined with techno-structural interventions. However, some consultants have different feelings about that.

*"...the agents wouldn't try to solve the communication issues for example by organizing gatherings while enjoying a cup of coffee all together. The client wouldn't appreciate it given the hourly rates of the agents...I personally wouldn't do it even if it could be useful..."*

**Environment-driven**

The last reason to incline towards techno-structural interventions has to do with the influence of the customer's social system on the consultancies' way of working. As frequently stressed by interviewees, it is the IT department that approaches consultancy firms to meet its demand for alignment.

*"Primarily, it's the IT that (is) will be held accountable for an unproductive relationship with business and therefore, it is IT that is mostly interested in alignment..."*

The consultancy agent involved in the alignment project will get immersed in the social structure of the ICT department it is working for, which exerts an intense pressure on the agent to adjust to that social structure. In contrast to the customer-centric quadrant in table 2, in these cases agents adjust *unintentionally* (or better said *unconsciously*) to the customer's social system. Here we make a structuration theory argument taken from Giddens (1976), who emphasizes the relationship between individual human agency and the social structure (traditions, institutions, codes, established ways of doing, language, norms, etc). Social structure is the product of individual agents' repeated interactions. These interactions are repeated because the social structure has formed individual's beliefs and language and because those actions that are deviant from the social structure are reacted on by other people within the same social structure with disbelief and sometimes even anger (Maes and De Vries, 2008). Unintentional adaptation from the consultant to the client's structure will bring the consultant towards techno-structural interventions because these are valued by the client's social system and deviant behavior, like human processual interventions would be reacted upon with disbelief. Unconsciously, the consultant will reinforce the client's social structure this way and could thus reinforce misalignment as well, making one wonder to who's advantage is the behavior described in the next citation.

*"...increasingly, we see that our agents are drowned in the organization they are working for ... and that's a good skill where we select our people on."*

The four reasons mentioned in table 2 have a meaning beyond a means to interpret what our interviewees told us. It provides us with a mind-provoking mirror. How many academics have made a character driven choice for this field and/or the topic of

alignment? How many business process centric approaches have we seen in the alignment literature and how often are problems like communication, poor interpersonal relationships and the like determined in techno-structural terms? And by doing so and teaching suchlike terminology, how many academics actually are part of the social structure that gets reinforced all the time?

## CONCLUSION AND DIRECTIONS FOR FURTHER RESEARCH

The organizational development field has brought forward many change theories, leadership perspectives, organizational learning approaches and intervention types ever since the field started in the 1940ies from the work of Kurt Lewin and the Tavistock Institute in the field of social psychology (French and Bell, 1998). OD has found its way into various fields like education, health care, community services, third world development work and organizational consultancy (Dick, 2006) and is at the origin of action research in IS (Baskerville et al, 1998). There is no reason to think that human processual interventions could not solve problems in the IS field and given its characteristics mentioned in the literature and by our interviewees, the business-ICT alignment is an excellent candidate. However the social structure in which IS people and consultants operate in practice and in which many academics are regularly involved as well, is one in which almost all interactions are done in techno-structural language and this social structure gets reinforced all the time by practitioners and academics expressing themselves in this language (Maes and de Vries, 2008). Whether intentionally or not, the four reasons why consultants are inclined to use techno-structural interventions as mentioned in table 2 does reinforce this social structure. As it is rather unlikely that OD consultants will be hired by ICT principals (because of this social structure), who is going to break with this social structure? Doesn't this mean that it is high time for IS academics to start to get an interest in this and try a different route towards solving alignment related problems in organizations? This is what we have in mind with this paper, although we are modest. It is just an indication pointing in a different direction.

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