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INCENTIVE AND DESIRE: COVERING A MISSING CATEGORY

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Abstract

There is a rhetoric in current European political agenda for widening access to ICT's as part of a strategy for encouraging greater participation in public life. We argue against a naïve assumption that technology in itself could provide solutions. Knowing that systems with potential for meaningful use are available is a necessary, but not sufficient, condition to bring about desire for use in any particular individual. Work of developers is often perceived within a narrow, largely (socio-) technical definition of information systems. However, it must be recognized that such systems are inherently dependent not only upon their social but also individual and cultural sense-making context. In order to create systems which can empower and involve people, developers need to take a holistic view. This should include the kinds of data people require and processes they will need to have in place to use them. It is suggested here that, in addition to 'content' data and 'process' data, IS professionals need to be concerned with a 'third category'. Why might people wish to use information systems in the first place? For what reasons and purposes would they require access to IS? What would generate desire for access? This third category of data must also be created and explored if IS developers are to take a holistic approach in building systems that can contribute to empowerment for use. This may only be explored through a process of contextual inquiry, using appropriate tools and techniques such as the framework for Strategic Systemic Thinking (SST).

Keywords: social inclusion, contextual inquiry, contextual dependency.

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1 INTRODUCTION

It is apparent to the authors that in some circles there is an idea that information and communication technologies can be used as a kind of 'magic bullet' to address perceived problems of social exclusion. A desire to use technical systems can only arise through socialization, comprising motivation and learning for meaningful use. The concept of 'social inclusiveness' itself requires exploration, since boundaries are open to self-definition by individuals who may be members of different communities within a complex and cosmopolitan environment. An associated area of political debate suggests that ICT's can be used to disseminate 'information' which will result in greater inclusiveness. The authors would argue that the role of ICT as a conduit for 'liberating' messages is open to question. Meanings attributed to such messages depend upon a complex range of factors influencing individual interpretations (Berger and Luckman, 1967). The question then arises 'who benefits'? From whose point of view is wider diffusion of ICT use to be judged?

The EU proposal for development of an information society sets a proposed agenda of (eEurope Advisory Group, The Expert Section, Work Group N°3, 2005):

Taking into account major social, economic and technological trends, a vision for governance, citizenship and cohesion for Europe in 2010 was formulated as follows: to build a "social connectivity network". The vision is to build a society where all individuals are empowered, through ICT access and capabilities:

- To live, relate and work in the way they choose;
- To seize employment and education opportunities;
- To take part in local communities, in public affairs at all levels, and also into transparent and participatory democratic processes.
-

An example arises in the UK Government's 'Inclusion through Innovation' Project which has among its stated aims: "to identify future trends in ICT and innovations which will address social exclusion;" and "to investigate how trends in IT provision can be influenced to prevent further growth of the 'digital divide'"; (authors' italics). (UK Government, 2005). The authors of this paper would argue against a naïve assumption that development and innovation within technology could in itself provide solutions. Clearly, there is a rhetoric in current political agenda for wider access to ICT's as part of a strategy for greater social inclusiveness. There is a need, however, for a holistic approach that does not isolate proposed solutions to problems from their fundamental causes. It is necessary to consider, in this context, how people might be empowered to make use of ICT availability in ways that would benefit them (from their own point of view) in their interactions in society.

A case which exemplifies this arises in suggestions that ICT's can provide for the needs of many people currently excluded from access to legal services. It has been argued (e.g. by Susskind, 2000) that the 'latent legal market' can be catered for using artificial intelligence. People who cannot currently afford to consult a solicitor could access on-line sources of legal advice. The authors believe that such a view is open to criticism. The ability of a layperson to choose for her/himself which of a range of expert systems can provide appropriate advice in a given situation, or to interpret the advice given and translate it into useful action, may be severely limited in practice.

The EU's vision for information society as articulated in the Lisbon agenda supposedly aims to '*strengthen social cohesion and improve quality of life for all Europeans.*' (Kaplan, 2005). However

within this vision certain assumptions appear to prevail. For example the suggestion that more intensive and efficient use of e-services such as e-healthcare systems can allow public organisations to improve their efficiency without loss of effectiveness makes the assumption that citizens are currently satisfied with existing service levels. Citizens may well have other aspirations for public services which remain unexplored.

Knowing that systems with potential for meaningful use are available is necessary, but not automatically sufficient, to bring about a desire for use in any particular individual (support for this reasoning can be found in e.g. Rogers, 1995). A person may have many and complex motives (social and cultural, as well as pragmatic) for taking up or not taking up any opportunity.

2 BACKGROUND

Socialization, we believe, is a key factor in empowering people for social inclusion. In order to benefit from access to a particular technology, it is necessary for a person to know that a potentially beneficial application exists, and to know how to apply the technology effectively in order to reap the suggested benefit. The first of these conditions might come about through everyday familiarity, e.g. a person who sees a better-paid colleague at work using ICT's might realise that s/he could improve her/his job prospects by learning to use them in similar ways. However, for those who are already 'socially excluded', such familiarity may be elusive. For the second condition, opportunities are needed for discovery, experimentation, training etc. in order to encourage skilled use of ICT applications. The authors consider that communication of ideas about technologies, and education to empower their users, would be key factors in socialization within an inclusive society. A further factor involves trust – by users in providers and developers to support them in proactive interaction with systems from which they can derive benefit.

Information systems could be defined as systems where information technique is used for information treatment, which aims to transfer 'messages' in time and space (Bednar, 1999; Bednar and Green, 2004). Many different interpretations of this definition have been applied by researchers and practitioners. Two contrasting examples of such interpretations follow. First order IS: A (socio-) technical system (mostly comprising ICT's), including human use of that system, form what is understood as an information system. The boundary of the system is perceived as limited by the extent of hardware and software and direct human use and interaction. Second order IS: A (socio-) technical system and human use and interaction, together with other, further inter-human communication within the organisation (or other human activity systems in social context such as communities, groups etc). Viewed in this way, an information system can be seen as an organisation (or human activity system) and is limited by perceived boundaries of a social network out of which the human activity system is created. A system is not to be considered as something existing in an objective reality (see for example Checkland, 1999). The authors refer to a mental construct which is created by an observer who perceives system boundaries from her or his individual perspectives as meaningful for particular purposes.

Both of these interpretations (first and second order IS) can be useful. We do not wish to suggest that it is automatically a problem to interpret information systems according to first order IS. However, since an information system is, in itself, dependent upon social context, interpretation of the roles of IS developers in this way presupposes that an analysis and understanding compatible with second order IS has already been carried out. Such an analysis would be required to explore organisational, communicational and social aspects of the context within which the system is situated and derive solutions to associated problems. This is highlighted by Greenbaum (1993), in relation to systems design. He suggests that design needs to be part of an integrated process that looks at work

organisation, job content, and the way technology is used to support these activities; that system developers would need to play active roles in fostering and enabling people to use their knowledge to make decisions; and that the step between fostering participation and enabling decision making is grounded in a question of power.

In common with both Gregory Bateson (1972) and Anthony Giddens (2000), the authors believe that positive and sustainable development of both society and organizations put high demands on learning. A broad and humane development strategy would probably raise demand for new forms of cooperation. In a global society, growing competition renders these factors even more important for governments, with pressure for more intimate collaboration both locally and globally. These collaborations are unlikely to proceed on a basis of equality, targeting everyone equally, however.

3 THIRD CATEGORY

Why should this be a topic for consideration for IS professionals and researchers? If wider participation in public affairs is to be supported, there are implications for information systems professionals. It may be suggested that the aim of IS developers is to enable relevant data to be made accessible to those who need it, and to enable them to transform and exploit it for meaningful use (Mumford, 2003; Wood-Harper et al, 1985; Checkland, 1999). This involves consideration of the kinds of data people require and what processes must be in place to facilitate its use. Thus, the work of IS developers may be said normally to be concerned with both 'content data' and 'process data' (i.e. what people need).

However, in the context of widening participation and 'inclusiveness', the authors would argue that there is a further concern for information systems professionals (analysts, developers etc): what we might term a 'third category' (see table 1 for an overview of the three categories). Why might people wish to use information systems in the first place? For what reasons and purposes would they require access to IS? (i.e. what people want).

There are motivating factors that might be described as 'fun', e.g. to be able to keep in touch with friends by email, to play computer games or to download music. At other times, people could be motivated by factors less positive but equally compelling, e.g. to receive training for employment, to access eGovernment services. This third category of data, we would argue, must also be created and explored if IS developers are to take a holistic approach in building systems that can contribute to empowerment for use. However, it is recognized that professionals are often constrained to work within a first order IS-influenced interpretation of their roles. Furthermore the emphasis in their work is often placed on efficiency and productivity rather than effectiveness when determining what people 'need'. Developers may have no scope to carry out contextual inquiry into the 'third category data' themselves (what people want). Instead developers must depend upon an analysis compatible with a second order IS interpretation having been undertaken in close collaboration with, and by, others. It has been pointed out that systems development has in the past tended to be dominated by the roles of (socio-) technical professionals, whereas there is a need for wider involvement to take into account contextual factors effectively. (Avison and Fitzgerald, 2003 p.14)

Category	Cover	Purpose
Motivation	Why	Trigger
Process	How	Action
Content	What	Object

Table 1. Categories of data

A discussion of motivation theory, considering hierarchies of need or taxonomies of motivating factors, is beyond the scope of this paper (for such discussions, see work of Maslow, 1943; McGregor, 1960 and Hertzberg, 1974). Empirical studies (e.g. Garcia-Lorenzo, 2006) support the view that it is important to note that people are unlikely to opt to use information systems unless they perceive some benefit in doing so. There have been previous efforts to investigate this dimension e.g the Technology Acceptance Model (Davis and Arbor, 1989). However such investigation tended to be limited to first order IS. Further research is needed to develop this area into second order IS. Motivation for use can be viewed as operating in two directions. What *incentives* might be necessary to people to take up IS use? What benefits would they derive and how could or should these benefits be highlighted to them? If the intrinsic benefits are not apparent, are extrinsic incentives such as payment required? *Desire* for access to information systems may exist, resulting in demand for greater access to services to be provided. How is such demand to be articulated, assessed and acted upon? If motivation is a necessary condition for IS use, then learning for meaningful use is an equally important aspect of socialization. As Argyris puts it:

"It is not possible for human beings to engage de novo the full complexity of the environment in which they exist. Life would pass them by. Human beings deal with the challenge by constructing theories of action that they can use to act in concrete situations." (Argyris 2004, p.8)

Argyris goes on to suggest that we all construct these theories of action in two types: espoused theories – our values, beliefs and action strategies – and theories-in-use which are the mental designs we make for action strategies taking into account intended consequences in causal sequence. The theories that an individual creates will be influenced by multiple contextual dependencies arising from her/his experience and environment (Bednar, 2000). Such experiences have been derived within the particular communities to which individuals perceive themselves to belong. 'Community' (Gemeinschaft) may be said to exist in the minds of those who are its members (Tonnies, 1957). The distinctiveness of a community lies in construction of meanings that members attach to it, expressed symbolically. It is in these meanings that boundaries are created, and not necessarily objectively observable geographic or demographic characteristics (Cohen, 1985).

It has been pointed out that learning may take place at a number of 'levels' depending on the efforts made by individuals in their thought processes. Bateson (1972) described these as orders of learning; Argyris and Schon (1974), writing in the context of management education, make similar descriptions when they refer to as single- or double-loop learning. In creating their own 'theories-espoused' individuals may initially adopt values and beliefs intuitively, leading to action strategies that may or may not be successfully adopted. When such strategies are not successful, individuals may consider what went wrong and change their theories-in-use for the future (single-loop learning). Further reflection may lead an individual to recreate her/his governing values, not just action strategies. We might then say that double-loop learning had occurred – exchange of one set of 'prejudices' for an alternative set. Great efforts by all participants would be needed if such a loop were to be transformed into a 'learning spiral' in which analysis ('knowledge' creation) and evaluation (grading of current 'knowledge') could lead to higher orders of learning, creating third category data. Support for participants in an inquiry into multiple levels of contextual dependencies surrounding second order IS might help to create such a spiral (Bednar and Bisset, 2001).

4 CONTEXTUAL INQUIRY

If change and improvement (as defined by the client, in this case the European governments) is to be successful, it would require that the relevant actors and stakeholders are engaged in that change process on their own terms. Here this would include those defined as 'socially excluded'. Without incorporating the socially excluded individuals (and communities) in the change process it is probable

that a government-imposed solution will fail. Individuals who are not involved typically lack the commitment necessary for successful transformation. Such a lack of commitment should not surprise us when we consider the plentiful reasons why they may have been defined as 'socially excluded' in the first place. The authors argue that, too often, change agents such as IS analysts or governmental representatives are unaware of the opportunities provided by resources inside the communities they target. As a result they try to tell these 'socially excluded' individuals and communities what to do. In addition, the insider knowledge (within communities of socially excluded) and sense-making experience may be unknown to the analyst or may not be viewed as an asset. Thus it is not enough for analysts and developers to use an interventional approach that focuses on situations without regard for the individuals involved. This is relying only on what analysts know and not utilizing the knowledge of inside resources. From the perspective of the 'socially excluded' those who are commonly regarded as 'socially included' are the outsiders. This means that an intervention (by government, analysts, consultants etc) is an intervention by an external party. For such an intervention to be meaningful would necessitate a dialogue and learning activity. The intervention would have to address issues that are in need of active engagement by the 'socially excluded' individuals. Analysts need support to broaden the possibilities of interpreting the problem space, and to understand the possibility that it might be highly unstructured (Bednar and Welch, 2005). This could be described as a learning activity that needs to be undertaken before any other approach to intervention is made. One possible vehicle for learning analysis would be the framework for Strategic Systemic Thinking (SST) see figure 1 below (Bednar, 2000). The reason is that, without a functioning dialogue, a constructive learning process based upon trust may become impossible. A dialogue based upon trust is a result of actors feeling confident and safe enough to engage in the change process. All parties, inclusive those defined as socially excluded need to be given a high level of both responsibility and ownership of the change process itself. Actors within communities of 'socially excluded' individuals should develop and carry out the inquiry under the mentorship of change agents.

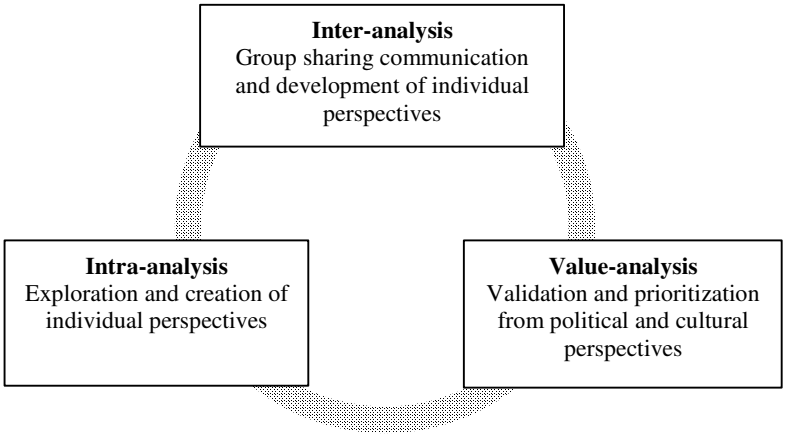

Figure 1. The framework for Strategic Systemic Thinking (SST).

The SST framework gives an opportunity to address many of the issues highlighted in this paper (e.g. Bednar, 2000; Bednar et al, 2005). It represents a contextual perspective that integrates analysis and evaluation into a decision making process associated with organizational or societal change. It is a form of contextual analysis; a question of an inquiry into contextual dependencies. The actors' contextual realities are based on their understandings of contingency, amongst other things. In a discussion of 'social inclusion' it seems reasonable to talk about those categorised as socially excluded being key stakeholders. From an analyst's point of view, socially excluded people should be viewed as 'insiders' when considering the communities to which they belong. The SST framework can be seen to provide a method for investigating perceptions and ambitions. This method helps to identify missing resources and poses possible solutions using the community's own understandings of the problem

space, using both individual and group participation. Actors may be assisted in the contextually relevant application of techniques for analysis. To be able to accommodate the required contextualisation process, the analytical activities themselves require co-operation between a combination of external analysts, internal analysts and clients. In the case of social exclusion, we define representatives for 'the government' as a particular type of 'clients' (problem defining). IS analysts as 'change-agent' (expert analyst) and representatives and members of the communities of 'socially excluded' as investigating analysts and facilitating analysts (see fig. 2). The 'socially excluded' are also clients of a kind, but as long as they are not members of the team of analysts they are described here as members of socially excluded communities. We might alternatively describe them as members of sub-cultures etc.

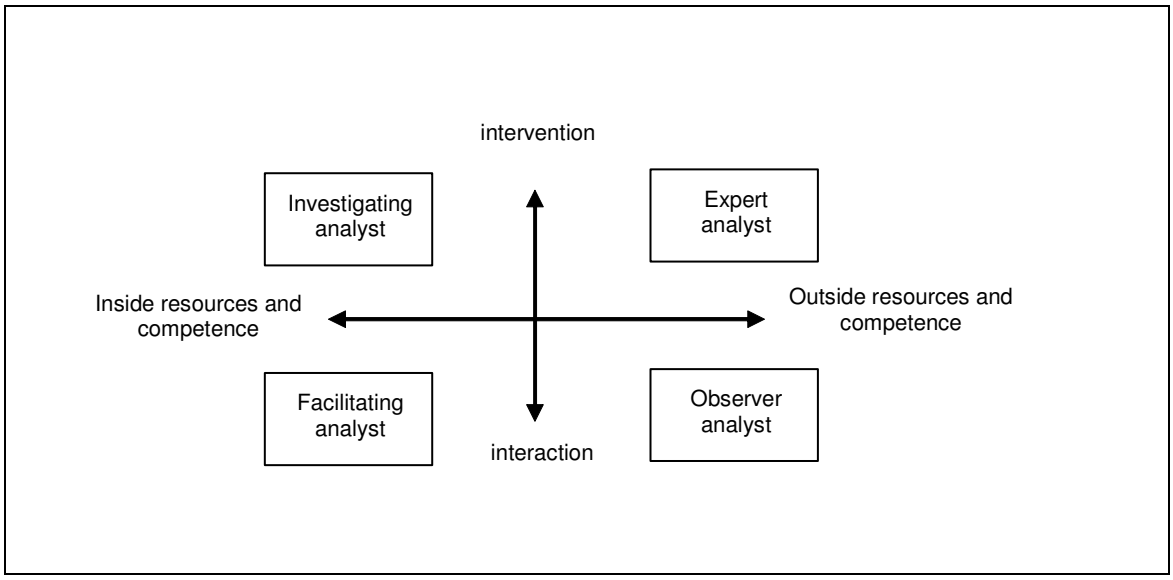

Figure 2. Roles of analyst

The expert analyst brings in expertise in the wider sense of systemic understanding and has the responsibility to reflect on questions and findings in relation to the application of the SST framework and project ambitions. The expert analyst may have a deeper understanding of the SST framework and systems thinking than the others. The observer analyst brings in expertise as an external facilitator with general competencies related to project ambition and intentions. The individuals categorised as 'investigating analysts' are those who do the actual inquiry and investigation of perceptions within any particular community. The facilitating analyst's responsibility is to support the investigators with the shaping of analysis and collaboration with external analysts. Both categories of internal analyst should be populated by members of the particular community whose perceptions are the subject for analysis. The main reason for having four categories of analyst is that any creation of a contextually relevant method used to assist teams in problem solving requires contextually dependent competence. The method for investigation itself needs to be a result of a combination of contextual competencies, owned by the four categories of analysts in collaboration, as members of a team.

5 CONCLUSION AND SUMMARY

In our view, the concept of 'inclusiveness' is not itself unproblematic. In societies in which master-slave relationships were common, it is clear that slaves play an inclusive role. Slaves fulfil an undoubted economic need within their wider societies, for which they may be socialized and, indeed, educated. They may, perhaps, be seen as empowered. Would we see their social inclusion as evidence

of a just and well-ordered society, however? There may be many boundaries to inclusion and empowerment, even when we are considering as a special case of inclusion participation in particular aspects of European society.

A further question that arises is 'From whose perspective social inclusion is to be viewed?' I might be seen by a representative of government as excluded from mainstream society, by reason of my educational experiences, employment opportunities or welfare history. However, I might regard myself as successfully integrated into a different 'society' in which different norms and values are considered to be more relevant. 21st century Western societies are complex not only be virtue of technological developments but also in their plurality, cosmopolitan nature and potential for many different self-defining groups and cultures to coexist and overlay one another. People may feel empowered within a sense of their own communities but not necessarily in terms that are recognized within established, political circles. Isen (1999, p.15) points out that the late 20th century saw a rise in 'identity politics' in which self-defining groups appeared to assert their perceived differences from mainstream society and reject a politics of inclusiveness.

An example can be found in the work of Mumford (2003). Managers in the Rolls Royce company sought to 'benefit' employees whose work role where rather mundane by building in more interesting (enriching) tasks. A particular group of employees however did not perceive any benefit to themselves in this. Their participation in the workforce was primarily motivated by a need for money to fund their self defined main purpose of participation in a theatre company outside of working hours. Any increase in commitment to Rolls Royce was unwelcome to them.

Desire for change may only come about if effective incentives can be generated. In this context, development of information systems will depend crucially on that 'third category (motivational) data' which could inform creation of systems not only for meaningful use but also for desirable use.

The authors challenge not only the idea that availability of ICT's is itself a force for social inclusiveness, but also an associated myth reflected in current European policy (op cit). This is that people can be empowered by communication to them of useful 'information'. Whilst it is clear that technologies for (mass) communication can be used to distribute messages to large groups of people, it is less clear to the authors that this results in communication of meaningful information. An example arises in Governments' apparent concern at a perceived disaffection with mainstream politics among young people. TV advertising has been used in an attempt to overcome apathy about voting. However, messages such as this do not necessarily have the effect desired by politicians. An advertising break is often a time when attention can be turned away from TV sets. If viewers do watch, the extent to which meaning is conveyed may depend on a complex range of influences from which an individual constructs her/his interpretations (e.g. Grunig, 1992). At the same time, a formal channel such TV is not the only conduit through which messages may be transmitted and it may be, again, relevant to consider the role that communities play in socialization and acculturation.

In order for people to be empowered for IS use, we perceive greater challenges to exist than making available wider access to innovative technologies. Institutional life at all levels needs to be imbued with an empowering culture in which people are socialized to recognize, define and engage in efforts to achieve their potential. Here we are reminded of the concept of 'the learning organization'. This is based upon assumptions of empowerment of members of an organization, and their socialization to become competent in taking responsibility and making decisions.

The authors would also wish to consider the question 'who benefits'? From whose point of view is the wider diffusion of ICT use regarded as beneficial? In what ways could it be liberating and for what purposes? Regardless of the desires of Government agencies and their political masters, it is by no means clear that there is a mandate from among the wider populace for regimens of social 'inclusiveness'. It is not necessarily obvious to us to what extent those individuals and communities labelled, in a particular IS context, as socially excluded would wish to be 'included'. Or indeed, under what conditions.

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