THE NEED FOR EXPLORING ALTERNATIVES IN SYSTEMIC INTERVENTION: TWO "INTENTIONAL" ARGUMENTS

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ABSTRACT

A recurrent guideline in many of the systems approaches to intervention is the need for exploring different alternatives. This guideline is present despite the different types of tools, the different paradigms or the arguments behind it. The purpose of this paper is not to contradict this, but to provide new arguments to this need that can be applied to the whole range of tools. The arguments shown here use ideas from language pragmatics and a combination of philosophy of action and complexity theory. What is central to the arguments presented is the concern with the intentions of the agents. In light of those, it is claimed that the advantages in the exploration of alternatives are hindered if they are not used in an intentional way.

Keywords: Complexity theory, Emergence, Intention, Intervention, Facilitation guidelines, Critical systems thinking, Multi-methodology, Language pragmatics, Meaning.

INTRODUCTION: EXPLORING ALTERNATIVES IN SYSTEMS APPROACHES

There are many ways in which the concept of system informs interventions. This is due in part to the different understandings of the concept of system as well as the number of paradigms informing the design of system's approaches (Jackson, 1991).

Despite the sheer variety of approaches, it is recurrent to see in many of them guidelines concerned with the exploration of alternatives. In fact, this can be observed no matter their hard, soft or critical origin. For instance, among the hard approaches we can mention the work of Beer (1994a; 1994b)on the Viable System Model. Here, it is fundamental for a viable system to contrast alternatives in order to cope with the huge variety of the environment and to filter the variety to which higher management is exposed.

Checkland's (1981)Soft Systems Methodology is a good candidate to represent the soft systems approaches. SSM can be seen as a "cyclic learning system" (Checkland & Sholes, 1990, p7). Consequently, it contrasts present situations with models of possible alternatives. This makes exploring alternatives the core of the approach. In critical systems Gregory's (1996) Discordant Pluralism, suggest the need to consider a constellation of approaches (methods, methodologies, theories, etc) from different

paradigms to avoid the problem of freezing and making less adaptable and responsive our strategies to deal with problems.

Obviously, this small sample does not cover neither all the system approaches nor all the arguments supporting the consideration of alternatives. However, they serve to illustrate not only how widespread is the notion of contrasting, but also the diversity of ways to argue for the guideline.

The present paper does not dispute the idea of contrasting alternatives. What it does is to provide two additional "intentional" reasons. The reasons are "intentional" by virtue of their reliance on the concept of intention. Additionally the arguments are "intentional", because it is pointed out that in order to take advantage of any argument that supports contrasting alternatives, the reasons behind the application must be carried out in an intentional way.

UNDERSTANDING RELEVANCE: COMMUNICATIVE INTENTIONS

The first "intentional" argument comes from the realm of language pragmatics. It focuses on communicative intentions as used by Sperber and Wilson's (1995) relevance theory. To explain this approach is necessary first to change our traditional way to understand communication.

The traditional way to communication is known as the code-decode model or the metaphor of the tube. On this approach the speaker has an idea on her mind, the idea is then coded and transmitted on the communication channel (the tube). On the other side, the hearer receives the message and de-codifies the message. The process of de-codification relies on the speaker and hearer sharing the same code. After the process the hearer now has on his mind the same idea as the speaker.

Using philosophy of language and language pragmatics, Grice (1991) and Sperber & Wilson's (1995), inferential model of communication proposes an alternative to encode-decode model of communication. On the encode-decode approach, the hearer can have the right code to rightly decode a message. On the inferential model, the central claim is "that an essential feature of most human communication, both verbal and non-verbal, is the expression and recognition of intentions" (Wilson & Sperber, 2002, p249). In other words, communication is about "guessing" the intention of the speaker and building on that infer what they are trying to say. Relevance theory proposes an explanation of how communicative intentions are recognised by the hearer, and how the speaker takes advantage of how the recognition process works to convey ideas.

Sperber and Wilson propose two reasons for which most communications are intentional: the first, "by producing direct evidence of one's informative intention, one can convey a much wider range of information that can be conveyed by producing direct evidence for the basic information itself". For instance, from a gesture or from a stressed word in a phrase we can infer a lot of information. The second reason, "to modify and extend the

mutual cognitive environment they share with one another" (Sperber & Wilson, 1995, p64).

Relevance theory starts from the assumption that individuals possess a cognitive environment. This is a sort of background knowledge encompassing all the assumptions that individuals use to make inferences about communicative stimulus.

This set of assumptions, the cognitive environment is affected always that a new stimulus arrives. New stimulus can weaken or strengthen old assumptions according to their relevance. In the communication process, we "alter the cognitive environment of your [our] addressees" and as a consequence the "actual thought processes" are also affected (Sperber & Wilson, 1995, p46). The process of communication produces changes. These are important because "a change in the mutual cognitive environment of two people is a change in their possibilities of interaction (and, in particular, in their possibilities of further communication)" (Sperber & Wilson, 1995, p61-62).

Cognitive environments are affected because "the human cognitive system has developed in such a way that our perceptual mechanisms tend automatically to pick out potentially relevant stimuli, our memory retrieval mechanisms tend automatically to activate potentially relevant assumptions, and our inferential mechanisms tend spontaneously to process them in the most productive way." (Wilson & Sperber, 2002, p254)

Two conditions are use to define the productivity (relevance) of a stimulus in a communicative interaction: "a. Other things being equal, the greater the positive cognitive effects achieved by processing an input, the greater the relevance of the input to the individual at that time. b. Other things being equal, the greater the processing effort expended, the lower the relevance of the input to the individual at that time" (Wilson & Sperber, 2002, p252).

In simple terms what this means is that something is relevant to somebody if it is possible to obtain many inferences from the stimulus, and it is not difficult to reach such inferences. In the process of defining the relevance of the stimulus, the hearer tries to match multiple contexts to the stimulus. The context that produces more positive cognitive effects using less effort is chosen.

The way in which Relevance is calculated has two consequences. One is that Relevance is a cost-benefit measure. The cost is the effort involved resolving the implications. The benefit is the amount of contextual effects obtained. The audience is looking to obtain the maximum productivity for the effort. Second, the process of evaluating those impacts is not quantitative. Relevance is a comparative criterion (Sperber & Wilson, 1995). We can define which assumption is more relevant to us only from a set of them.

Having outlined some basic theoretical propositions, we can now briefly examine what this means in the context of systemic interventions. Systemic interventions necessarily imply a communicative process (Midgley, 2000). Therefore, Relevance Theory applies to them. What can tell us Relevance in relation to exploring alternatives in systemic intervention? It is telling us that if we have only one alternative, we will have only one

context to evaluate the relevance of a stimulus or piece of information. Consequently, any stimulus will find its relevance on this single context.

Having a single context to evaluate relevance produces a common problem. One speaker (she) explains something that has to be done to a hearer (he). She describes this using a context A. Unbeknown her, he is alien to context A. What is more, he is quite knowledgeable about context B. However, using context B, he maximises relevance and make sense of what her is saying. He will not have the need to make questions to clarify the matter because everything seems to make sense. Now when she asks if everything is clear, he says yes.

In this situation, later they will wonder about the miscommunication. Having the possibility to access different contexts will make both the speaker and hearer aware of the possibility of misunderstanding each other. Consequently, they can test each other an assumption about what is being said, improving the possibilities for a better communication.

Another implication of relevance is that the alternatives to be explored need to be really different. If they are not, it will be difficult to understand what effort is really required to process the stimulus and what are the possible implications and cognitive effects for each context.

A side effect of having different alternatives is to have the possibility to find more connections between elements that belong to different alternatives, and perhaps in this way, create new contexts or alternatives for the evaluation. This can be seen as possibilities for enhancing the flexibility and creativity in intervention.

It is also important to show that Relevance Theory also presents us with a caveat to the number of alternatives. If this number is big, the processing effort could be too costly, leading to diminishing returns.

UNDERSTANDING MEANING: INTENTION AS A COMPLEX SYSTEM

The second argument for exploring alternatives is based on a different tradition of intention, this time from a mixture between philosophy of action and complexity theory. Philosophy of action is concerned with "what are actions" and "how are actions to be explained" (Mele, 1997, p1). "Intentional action is of primary importance in the philosophy of action. If there were no intentional actions, actions would be of little interest at best, and perhaps there would be no actions at all" (Mele, 1997, p16). Intentions serve purposes such as guiding, sustaining and even causing the action (Mele, 1992). Complexity theory deals with complex systems in which emergent levels of organisation constrain the behaviour of lower levels. Juarrero (1999), mixes both sets of ideas to understand intention as a complex adaptive system.

Juarrero specifically relies on the idea of second-order context-sensitive constraints. First order constraints mean that after an event, some options are open for the next event but

not others. Consequently, the second event is conditioned by the presence of the first one. Second level constrains, appear when some of the processes in a net connect creating a loop. In some conditions this structure as a whole favours the events that sustain the existence of the loop itself, a kind of auto-cause or self production. The system constituted in this way also constraint what events will be triggered in the whole chain. In other words, we have now a new level of organisation with an emergent behaviour.

Juarrero conceptualise intentions as one of these second-order context-sensitive constraints. When applied to action, these constraints are manifest through "sudden changes in the conditional probability distribution of component behaviour" (Juarrero, 1999, p175). The alteration of the component behaviour is now biasing which actions will be pursued, thus guiding, sustaining and as a self-cause, causing behaviour.

In the same way, the biasing of behaviour is causing a partition of the space of possible actions. Not every action on the space of actions is available once intention acts. Something is "grouping" the actions towards it. One of the reasons because this is important is because regarding how the space of actions is partitioned, the meaning of the action arises.

To explain the partitioning of the space and how meaning is obtained, Juarrero makes use of the concept of contrast space as put forward by Garfinkel (1981). This concept was originally conceived to highlight the differences between a set of explanations.

Garfinkel (1981) explains based on the following case: A priest asks a bank robber why he robs banks, the robber replies that the money is in banks. The idea is that here both the priest and the robber are emphasising different aspects of the situation producing different explanations and contrast spaces. The priest focuses on the fact of the crime, so he is partitioning the space between rob and not rob and possibly ideas about the good and the bad. The robber emphasises banks, so he is partitioning the space considering different scenarios as attractive scenarios for the crime: banks, petrol stations, etc.

It can be noted that the meaning of "robbing banks" is not clear until we consider the contrast space. It could be a phrase to condemn the action (priest) or a confirmation of the kind of criminal activity in which somebody has chosen (the robber). What is giving the meaning is the contrast with the other elements of the contrast space.

Although the idea of contrast spaces seems static (the aforementioned example shows just one single comparison), second order contextual constraints are not. The use of the concept of an attractor and trajectories of actions show the dynamic side of the process. Juarrero conceives that we can understand actions as sequences of act-tokens. Consequently, they can be seen as a trajectory. In turn trajectories are affected by the second order contextual constraints. Therefore, when they are in the presence of an intention, they are attracted to certain patterns. Combining this idea with the contrast spaces it can be said then that meaning attracts actions to a certain pattern, to a certain attractor.

This is a familiar experience. If somebody is already set to a course of action, this person will tend to use any comment to support her/his course of action. The contrast space is "colouring" every stimulus in the preferred direction. For that reason the priest is thinking about his action in terms of saving a soul, and the same phrase is the consideration of a setting for the crime. The complex adaptive system of intention is then looking for ways to support the course of action. The element or stimulus is adapted despite its original intention (or lack of it).

What are the consequences of this for systemic intervention? If there is a lack of alternatives to configure a contrast space, the meaning of the actions will not be clear. Here it will be very difficult to know if the participants really agree on the improvement actions to intervene.

Additionally if meaning is not clear, the actor applying methodological guidelines cannot effectively define a trajectory of actions. In this sense the actor is not obtaining the full benefit of the guideline. The use of the guideline needs to be intentional.

CONCLUSIONS: COMMUNICATION AND PURPOSE

At the introduction of this paper, some arguments that support the exploration of alternatives were mentioned: coping with variety, learning, and keeping dynamic adaptable approaches. The arguments belong to different intervention tools (model, methodology, multi-methodology). Additionally they referred to different paradigms.

However, their arguments are circumscribed to the tool in focus. The arguments presented here are not. They can be applied in every stage of an intervention process regardless of the applied approach. The arguments suggest, for example, that the three reasons mentioned in the approaches at the beginning of the paper will benefit from their implications being clearer and from their meaning directing their use.

In short, the argument presented here can be applied to all these approaches because intention is inherent to purposeful human behaviour. They refer to the problems of how we understand communications, and how we attach meaning to our actions, that is to say, how we make them purposeful. The guidelines provided by these arguments are needed because systemic interventions are inextricable combined with communications and purposes (Midgley, 2000).

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