

STRETCHING THE CONCEPT OF BOUNDARY IN BOUNDARY CRITIQUE

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ABSTRACT

The way in which boundary is marked around an issue, determines the way in which we understand, approach and intervene in such an issue. Stretching the way in which we understand the concept of boundary can expand our understanding of how to approach interventions in themselves. This paper proposes to contribute to understanding of boundary in Boundary Critique in two ways. First, by showing that those bounds can be understood as flexible and changing with every interaction of the actors. Second by showing that what is left outside of the limit defines the meaning of what is inside. The arguments draw from philosophy and pragmatics of language.

Keywords: Boundary, Boundary Critique, Language Pragmatics, Language Games, Boundary Games.

INTRODUCTION

The way in which boundary is marked around an issue, determines the way in which we understand, approach and intervene in such an issue. Working out new ways for understanding the concept of boundary, marks different boundaries around the concept itself. The likely implications are not only about how we treat an issue but how we approach and learn from interventions. The present paper contributes to the discussion and understanding of boundaries in Boundary Critique (Midgley, 2000; Ulrich, 1983; Yolles, 2001).

Exploring a concept such as boundary makes the purpose of this paper philosophical. “It is concerned not with the description and explanation of empirical facts, but with the elucidation of the forms in which we describe empirical facts – that is, with the description of our conceptual scheme. It does not add to our knowledge of the world, but contributes to our understanding, ... of the knowledge we already have. For its results are not, and cannot be, startling new facts and theories, but only the clarification of the forms of thought that we employ”. (Benett & Hacker, 2003, p.439).

This paper starts by presenting some of the works in Boundary Critique and their understanding of boundary. Next, it proposes Language Games in Wittgenstein philosophy as a possible foundation for understanding boundary and intervention. On this basis, the following sections will suggest two properties for boundaries. First, that those boundaries are affected by each interaction changing along the whole intervention process. Second, that a boundary has “shadows,” elements left outside that are important

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for understanding the meaning of what it is inside. Finally, the paper presents some conclusions and implications.

HOW BOUNDARY IS UNDERPINNED IN BOUNDARY CRITIQUE

“Distinction is perfect continence. That is to say, a distinction is drawn by arranging a boundary with separate sides so that a point on one side cannot reach the other side without crossing the boundary. For example in a plane a circle draws a distinction.” (Spencer-Brown, 1972:1)

The simplest way to understand the concept of boundary is perhaps Spencer-Brown idea of boundary as a drawing that separates two sides (Figure 1). From this perspective, boundaries are clear cut, there is not doubt about what belongs to the inside or the outside of the boundary. However, Churchman’s work challenges this notion. “From the point of view of ideal-planning, the question of the proper boundaries has no plausible, common sense answer. It’s like all the other questions, about clients, purposes, measure of performance, etc. The idea is not to find an answer but to foster the process of unfolding” (Churchman, 1979, p.91).

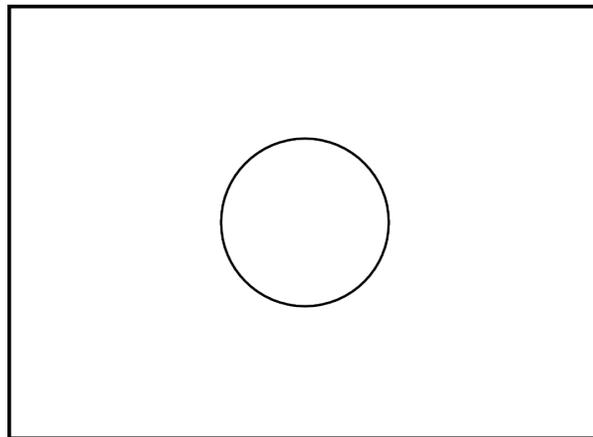


Figure 1. Simple notion of Boundary: the closed curve separates the circular area from a “universe”, represented here by the rectangle.

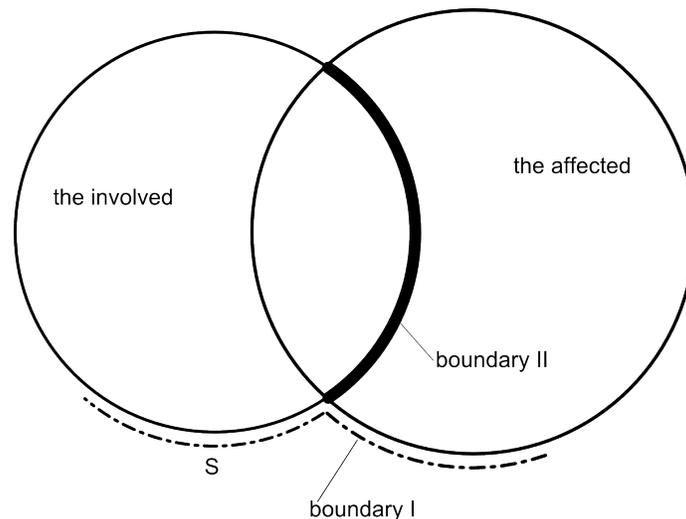
Consequently, boundaries are not really given by nature. They need to be constructed and “unfolded” by the participants. How they are marked will have a decisive influence in how the issue or system under focus will be tackled (Midgley, 2000). Churchman approaches the process of unfolding the boundary as a dialectic process as in Hegel philosophy (Jackson, 2000). It is a cyclical process where we strive for being more comprehensive and take more and more issues into consideration.

Although, Boundary Critique can trace its roots to Churchman, It is Ulrich who establishes the concept. Its aim is “to make visible the ways in which any specific claim

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is conditioned by boundary judgements and how the facts and values it asserts change when the boundary judgements are modified” (Ulrich, 2003, p.333–334). In a nutshell, his work takes Churchman’s ideas of Boundary and couples it with the critical philosophy of Habermas, especially his work on communicative action. Based on this principles, Ulrich work, seeks to achieve equitable opportunities of participation in situations with uneven conditions among the actors. On this basis, Ulrich develops methodological approaches to improve the conditions of others (Brocklesby & Cummings, 1996, p.741).

Ulrich (1983) identifies the boundary of the system based in who is involved and who is affected (Figure 2). This basic distinction evolves in the identification of crucial stakeholders: client, owner, planner and witness. This in turn unfolds in a methodology of twelve critical questions to assess the boundary examining the sources of motivation, control, expertise and legitimisation that correspond in that order to the mentioned groups of stakeholders. Each of the questions is posed in is and ought mode, enabling contrast and critical evaluation of the current system. Ulrich (2003) sees these questions as fundamental before engaging in intervention with other methodologies.

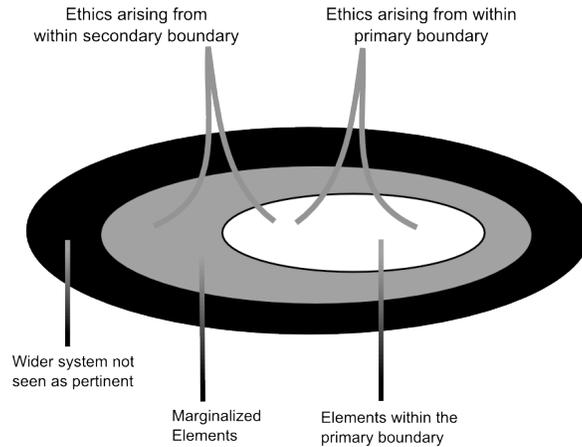


**Figure 2. The Systems S has a Boundary as a function of involved and affected.
Source Ulrich (1983, p.248).**

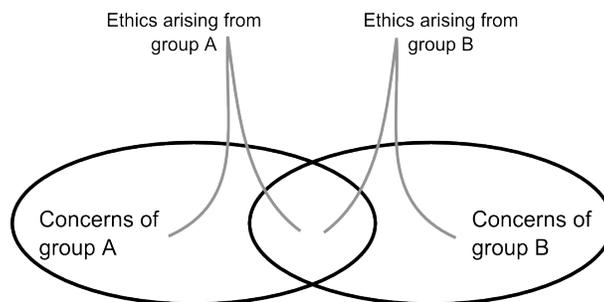
Midgley’s work builds up from Churchman and Ulrich. He states that boundaries are “social and personal constructs that define the limits of the knowledge that is taken as pertinent in an analysis” (Midgley, 2000, p.35). Philosophically, he uses Whitehead’s process philosophy to show that any attempt to gain knowledge requires first a judgement about the boundary. How or on what we gain knowledge depends on how boundaries are marked. On the intervention side, he focuses on the problem of marginalisation, namely how actors are included, excluded and the emergent conflict. On first sight, his approach looks similar to that of Ulrich.

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However, for Midgley, the key elements are the values expressed in the concerns of the stakeholders. Those concerns are valued or devalued acquiring “sacred or profane status”. When in action, these values give rise to particular ethics from inside each one of the boundaries distinguished in the situation (Figure 3 shows two ways in which Midgley conceives the situation). The interplay of these different ethics is what produces conflict (Midgley, 2000).



(a)



(b)

Figure 3. (a) Ethics arising in a situation with marginalized and a main/primary group. (b) Ethics arising from two different groups of stakeholders. Both diagrams are adaptations from Midgley (2000).

From this brief overview, it is important for this paper to point out that for Churchman, it is not clear what boundaries are enclosing, nevertheless, they experience a “process of

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unfolding”. In Ulrich, the boundaries are linked to stakeholders, while in Midgley, they are linked to values. Contrary to Churchman idea of a process of unfolding, the boundaries in the case of the other two authors seem fixed once they are discussed, diagnosed or analyzed. They use boundary as a fundamental prior task before an intervention, but something that it is not so necessary afterwards. Next section will show a foundation to bring back the idea of unfolding boundaries where boundaries are involved through the whole intervention process.

LANGUAGE GROUNDS FOR BOUNDARY AND INTERVENTION

The argument that follows has kept the ideas of unfolding boundaries in Churchman, the importance of language in Ulrich, and boundaries as constructions in Midgley. However, the foundations used, diverge from those used by the mentioned authors.

The foundation used here to meet the aforementioned conditions is Language Games. The concept of Language Games is introduced by the philosopher Ludwig Wittgenstein as a way to explain the nature of language. He states that language is a tool, an instrument that let us do things, an idea that resonates with the need of tools for intervening.

In itself, Language Games are “the whole, consisting of language and the actions into which it is woven” (Wittgenstein, 2001, §7). Notice that this definition can be applied to every human interaction, including interventions. Just look at every action, gesture, discourse, and also every use of techniques, methods and methodologies (regardless of their philosophical and theoretical underpinnings) as uses of language and action. Furthermore, the interaction already present in the setting, the problematic situation can be thought in terms of Language Games. Consequently, when we are intervening what we are trying to do is to use Language Games to affect the Language Games already in place.

Wittgenstein proposes that just as other games, Language Games have rules. However, in a game, rules work in many different ways. They can be created, eliminated, changed. They can be fixed, flexible, not clear, incomplete, and even incoherent. Additionally, “The rule may be an aid in teaching the game. The learner is told it and given practice in applying it. —Or it is an instrument of the game itself. —Or a rule is employed neither in the teaching nor in the game itself; nor is it set down in a list of rules” (Wittgenstein, 2001, §54). Rules are flexible. They guide but not rule.

Now, in Wittgenstein’s terms, this paper proposes some games in relation to the boundary. As any kind of game there will be some rules. What kind of rules can we expect in relation to a boundary?

“When one draws a boundary it may be for various kinds of reason. If I surround an area with a fence or a line or otherwise, the purpose may be to prevent someone from getting in or out; but it may be also part of a game and the players be supposed, say, to jump over the boundary; or it may shew where the property of a man ends and that of another

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begins; and so on. So if I draw a boundary line that is not yet to say what I am drawing it for” (Wittgenstein, 2001, §499).

Consequently, it is not really possible to say that Wittgenstein presupposes some uses for the boundary or a particular game. It can be said that Wittgenstein gives us conceptual space to find some uses on our own. This is the role in the next two sections.

BOUNDARY CHANGES ALONG THE INTERVENTION PROCESS

As it was mentioned Ulrich and Midgley’s methodological strategies seem static in their understanding of boundary. Churchman understands that boundaries undergo an “process of unfolding” but in his case, there is no way to assess the boundary in his methodology. The problem is perhaps finding a foundation capable of displaying the process. It is argued here that Languages Games is the first part of this foundation. The second: Relevance Theory.

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 the 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, p.46). 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, p.254).

Basically, the proposal here is to conceptualise that a boundary surrounds the cognitive environment. What it is necessary is then a way to assess the effect that every communication every use of language or language games can have on the boundary. Relevance Theory also provides us with such a way.

Relevance Theory proposes two conditions 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, p.252).

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Basically, 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 productivity 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. Based on the productivity of the Stimulus, Vélez-Castiblanco (2012) proposes a typology of effects or Boundary Games.

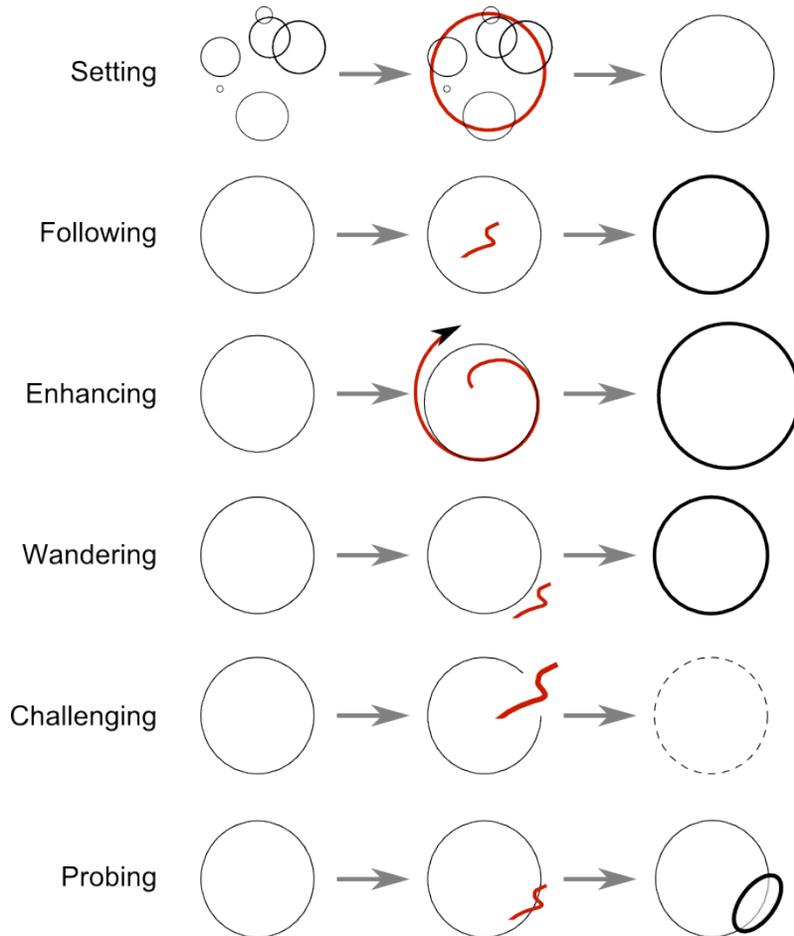


Figure 4. Boundary Games.

Figure 4, shows the different moves in relation to the boundary in each one of the games. The figure shows three stages for each game: The initial state, the applying the operation and the outcome due to such operation.

The initial state is the same for all except for Setting. In Setting we are joining portions of different boundaries. All the other operations are performed on an already established boundary. In the second stage, the operation focuses in some cases on where the

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movement lies: inside (Following), outside (Wandering) or on the boundary (Probing). In the other cases, it shows a kind of action on the boundary: enclosing (Setting), breaking (Challenging) and expanding (Enhancing).

The third stage, the outcome, shows the effect on the boundary. Setting shows that a boundary was constituted. Following, Enhancing and Wandering show a bold boundary meaning that the boundary was strengthened. The circle in Enhancing by being bigger also shows that the boundary expanded. Challenging weakens the boundary for that reason the line is dotted. Finally Probing creates a kind of “sub boundary” on a segment of the boundary.

Any kind of communication can produce one or a combination of the effects presented here. This implies that boundaries can be use to understand and make sense of the whole intervention process (not only the diagnosis) and with all kinds of approaches (all of them need to be communicated). Notice also that the stakeholders used by Ulrich, and the values used by Midgley to resolve where the boundary lies, can both be conceptualise as assumptions in a cognitive environment.

Relevance theory can be use as well to track yet another way to think about the boundary. This is explained in the next section.

BOUNDARIES HAVE SHADOWS

The way in which Relevance is calculated has two consequences. One, already mentioned is that Relevance is a cost-benefit measure. 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.

Being Relevance a comparative criterion implies that we cannot really grasp the meaning of a stimulus in isolation. The stimulus is relevant just in contrast with other contexts or cognitive environments. This suggests that the selected context or cognitive environment is a boundary and the contexts enabling the contrast/comparison, belong somewhere else, yet in some way they are attached to the boundary, for that reason the use of the metaphor “shadow”. The relevance of the boundary in focus depends not of all what is outside of that particular boundary but of the boundaries that enable the comparison.

A way is to strength the idea of “Shadow” is through the concept of Contrast Spaces as put forward by Garfinkel (1981) based on Dretske (1973) work on contrastive statements. Garfinkel (1981, p.24) cites the following case by Dretske (1973):

“Suppose Alex, after being fired, needs some money to meet expenses until he finds another job. Clyde lends him \$300. It seems fairly obvious that there are three different questions (at least) that we can ask with the words ‘Why did Clyde lend him \$300?’ and, accordingly, three different explanations one can give for Clyde’s lending him \$300. We may want to know why Clyde lent him \$300. The answer might be that this is how much Alex thought he would need; or perhaps, though Alex wanted more, this is all the ready

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cash that Clyde had available. On the other hand, we may want to know why Clyde lent him \$300— Why didn't he just give it to him? ... Finally, we may be interested in finding out why Clyde lent him \$300.”

Garfinkel shows the different meaning on this case can be understood as contrast spaces, something that is represented here by the shadows in Figure 5. The idea is that once we understand what are the alternatives considered, we can point out which one is the explanation is being sought for Clyde lending \$300.

What Dretske uses for analysing a statement is extended by Garfinkel for analysing theoretical explanations. Here in this paper the idea is that these “shadows” can be use for making sense of the boundary. So to understand the system, we need to understand the contrast. Metaphorically, all the actors in the situation by their own observation/perspective produce a shadow of the boundary in focus.

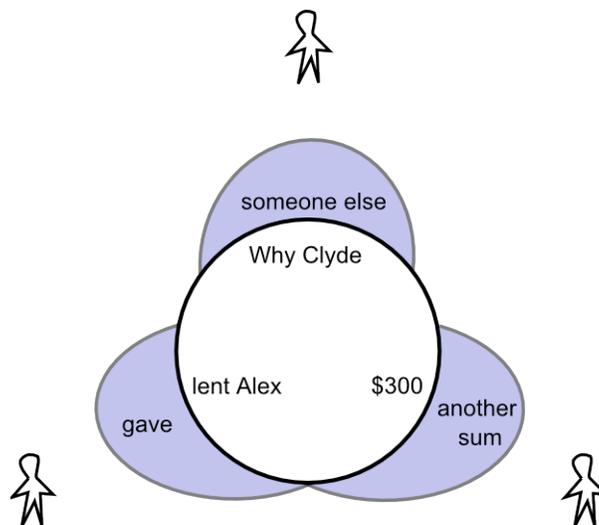


Figure 5. The contrast spaces in “Why Clyde lent Alex \$300” can be represented as “Shadows” projected by the boundary accordingly to the point of view of each observer.

When Systems Thinking refers to a distinction or a Boundary, it uses as the contrast for the system being distinguished the whole universe just as in Figure 1. Here the idea is that not the entire universe is equally significant for understanding. What it is important for understanding the issue or system is what people considered an alternative but at the end was left out of the system.

CONCLUSIONS

Boundaries are a powerful way to conceive intervention because independently from the way in which it is informed, and even if boundaries are not explicitly used to reflect upon

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the situation, interventions can be seen as determined by them. This paper proposes to expand the characteristics that we associated to boundaries in Boundary Critique.

Here the notion is stretched in two ways. First, by showing that boundaries change with every interaction and are not fixed. Second, by arguing that human understanding creates not only boundaries but also shadow boundaries that need to be understood in order to understand the boundary in focus.

The works of Ulrich and Midgley focus more on tools where the boundary is used as a conceptual tool to foster the engagement of the stakeholders. Therefore, the effort in an intervention is to define or reach an agreement about what are the boundaries before using other strategies. The boundaries reached, fix in an almost absolute way what is pertinent or not to understand the problem at hand.

The paper proposes to see boundaries as constructions in language that moves in every Language Game, namely, they move in every interaction. Additionally, it was argued that boundaries have “shadows.” They are needed to grasp the meaning of what is distinguished in the system or problematic situation.

These characteristics imply a shift in the conceptual framework for thinking about intervention. As Garfinkel (1981) states this is important because different ways to conceptualise a problem produces different possibilities for questions, explorations and actions.

The proposed characteristics from the boundary let us formulate some questions that could be of interest for learning and acting in intervention, for instance: How boundaries can be changed? What can we learn from the process of changing them? How can we know that a group of actors share meanings? How can we change the meanings associated with an issue? How to reach shared meanings? These questions can help to complement the current questions in Boundary Critique.

REFERENCES

- Benett, M. R., & Hacker, P. M. S. (2003). *Philosophical Foundations of Neuroscience*. Oxford: Blackwell Publishing.
- Brocklesby, J., & Cummings, S. (1996). Foucault plays Habermas: An alternative philosophical underpinning for critical systems thinking. *The Journal of the Operational Research Society*, 47(6), 741.
- Churchman, C. W. (1979). *The Systems Approach and Its Enemies*. New York: Basic Books.
- Dretske, F. (1973). Contrastive Statements. *Philosophical Review*, 82(October), 419.
- Garfinkel, A. (1981). *Forms of Explanation: Rethinking the Questions in Social Theory*. New Haven: Yale University Press.

Stretching the Concept of Boundary

- Jackson, M. C. (2000). *Systems Approaches to Management*. New York: Kluwer/Plenum.
- Midgley, G. (2000). *Systemic Intervention: Philosophy, Methodology and Practice*. New York: Kluwer Academic/Plenum Publishers.
- Spencer-Brown, G. (1972). *Laws of Form*. New York: The Julian Press Inc.
- Sperber, D., & Wilson, D. (1995). *Relevance: Communication and Cognition* (2nd ed.). Oxford: Blackwell Publishing.
- Ulrich, W. (1983). *Critical Heuristics of Social Planning: A New Approach to Practical Philosophy*. Chichester: Wiley.
- Ulrich, W. (2003). Beyond methodology choice: critical systems thinking as critically systemic discourse. *Journal of the Operational Research Society*, 54, 325–342.
- Vélez-Castiblanco, J. I. (2012). *Intention in Intervention: A Philosophical, Theoretical and Empirical Exploration*. Unpublished PhD Thesis, Victoria, Wellington.
- Wilson, D., & Sperber, D. (2002). *Relevance Theory*. *UCL Working Papers in Linguistics*, 14, 249–287.
- Yolles, M. (2001). Viable boundary critique. *The Journal of the Operational Research Society*, 52(1), 35.