INTENTION IN INTERVENTION: A PHILOSOPHICAL, THEORETICAL AND EMPIRICAL EXPLORATION

By

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Abstract

This thesis seeks to explore the role of agent or 'user' intention in the fields of Management Science and Systems Thinking. Primarily through the use of various modelling approaches these fields seek to provide assistance to organisational stakeholders who are looking to intervene in situations with a view to dealing with problems and/or bringing about some form of 'improvement'. Although the literature acknowledges that the various methodologies, techniques and tools of MS/ST can be used flexibly depending upon user intention, to date, intention itself has not been the subject of detailed investigation. The thesis seeks to plug this gap in the literature.

In exploring intention in some detail the thesis interlinks philosophy, theory and empirical work. The philosophical and theoretical components allow us to conceptualise intention and better understand how it might work in concrete settings. The empirical component, conducted with a team of action researchers, grounds the discussion in practice.

The main proposition of the thesis is that intention is a dual-sided phenomenon, i.e. "we do things intentionally, and we intend to do things" (Bratman, 1997). Thus intention has a present and a future side. The research reported on through the thesis shows how, through language and actions, both sides of intention can significantly shape the nature of interventions.

This being the case, the value of the work is that it provides new ways of accounting for and learning from interventions; in particular, it provides new frameworks for practitioners to better reflect on and guide their actions.

In memory of my mother

This is a thesis about intention. It is said that intentions cause, guide and sustain our actions and projects. I learnt that without the people around us these roles cannot be fulfilled. I want to thank the following persons for helping me to fulfil my dream of a PhD.

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My father Ivan, my mother Fanny and Liliana my sister. They were and are always within me.

Finally to Estela my wife, I am very lucky to be with someone with the love, craziness and strength to accompany me the whole way.

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Chapter 1 Introduction

1.1 Intervention and Intention

We intervene in situations to produce changes and improve them. There are many kinds of situations that can benefit from an intervention. They can be for stabilizing an economy or helping somebody with an addiction. They can be for humanitarian reasons or related to areas such as law, education or health. Here I am concerned with interventions informed by Management Science/Systems Thinking. This kind of intervention is aimed to improve organizational situations, and on those interventions I want to focus on the role of intention.

Intention seems a very desirable concept to understand and take into account in an intervention context. After all, we attach to intentions the power to cause, affect and guide our actions. Intentions let us change the meaning of words and actions. For instance, the word *hello* can be pronounced in a welcoming or a threatening manner. Additionally, intentions let us consider actors, the people holding them. However, in the field of Management Science/Systems Thinking intentions are taken for granted, and their understanding is underdeveloped. This is perhaps due to the nature and purposes of the field.

Management Science/Systems Thinking (hereafter MS/ST) deals with problematic situations not only in commercial organisations but also in contexts such as the public sector or the community. It is concerned with a very diverse range of factors, including structures, processes, data, resources, relationships, people, world views, goals and aims, controls, actions and reactions, uncertainties, conflicts and structures (Daellenbach & Flood, 2002, p.210). Due to the range of factors, it logically follows that MS/ST must draw upon many fields of knowledge (such as mathematics, physics, sociology, linguistics, philosophy, or biology), and from different paradigms (functionalist, interpretive, critical, post-modern) (Jackson, 2000). MS/ST´s foundational diversity reflects on the diversity of tools that can be used to inform/act in a situation. For instance, it is possible to use elements such as theoretical and philosophical assumptions, prefigured activities, models, recommendations, principles, guidelines, methods, or methodologies.

Obviously, it is possible to take action based only in gut feelings, namely on intuition rather than rationality. However, MS/ST is built on the assumption that you can advance ways to inform action (Jackson, 1991). Consequently, it pays to develop, test, and learn from the application of tools. For instance, Learning is embedded and is an integral part of proposals such as Soft Systems Methodology (Checkland, 1981) and Total Systems Intervention (Jackson, 2000). What is learnt during their application is feedback to the methodologies. In this way, the knowledge is improved and then codified on them (Keys, 1997).

Ideally, this reflection on the use of tools and systematic learning from experience improves the chances of success at intervention. With the passage of time and the iterative building on accumulated experiences, tools mature, and, as a result, standards about how they might 'properly' be used can be defined. This is specially the case in methodologies.

In simple terms, methodologies encompass steps and guidelines used in MS/ST to guide action for improving problematic situations. Those steps or guidelines could include recommendations about how to get the relevant data, how to deal with the participants, how to build models to represent the situation, and how to implement changes in the situation. With such standards covering the different stages of the intervention, it can be expected additional benefits such as facilitating understanding between actors or increasing the confidence in the quality of the work that is going to be carried out.

Formulating standards is also a way to manage the diversity of existing tools. For instance, when confronted with a huge variety of approaches, how can the agent know what tools to use? One response to this has been to define standard uses that identify what tools best assists what kind of problem situations (e.g. Mingers & Gill, 1997; Jackson, 2000).

However, it can be argued that the drive for standards pushes the actor away. The idea is that standards are possible if we are objective, and we get rid of actors' "interferences" and "intrusions". For the sake of the standard, along with the actor

their intentions are also thrown away. However, there is evidence in the literature that standard uses are not being achieved in real-world interventions. Reasons for this situation include tools "being used wrongly" (Jackson, 2003a, p.1300), the dynamics and complexity of the situation (Midgley, 2000; Taket & White, 2000), different understandings of the methodology (Brocklesby, 1995) and the influence of the practitioners own reflections (Kay & Halpin, 1999).

If standard uses are not achieved, there are cracks in the notion that perhaps can allow us to reinforce the idea that actors are important. I am focusing on one of the cracks hindering the possibility of standards: the influence of the actor on the intervention. The way in which I want to contribute to the discussion of this influence is through actors' intentions. The assumption is that when the actor is embedded in a situation, s/he can have a unique understanding of the context. Based on that understanding the user intent can, if so desired, help to shape, modify or guide the actions and tools used in order to make them more relevant and potentially useful given the distinctive nature of the situation at hand. This assumption triggers the purpose of this research.

This thesis is a preliminary exploration of the relevance of intentions for the practice of interventions. Due to the exploratory nature of the research, intention is examined here considering discussions linking philosophy, theory and empirical work.

The philosophical component of the thesis helps to elucidate how to understand some of the concepts. The process of intervention and the conceptual tools used on them such as methods and methodologies are understood using the concept of Language Games in Wittgenstein's philosophy. The basic understanding of intention is based on Philosophy of Action. On this ground, intention is then conceived as a dual-sided phenomenon. "We do things intentionally, and we intend to do things" (Bratman, 1997). While one aspect of intention focuses on the present, the other does it to the future.

The theoretical component helps to develop and explain each side of intention. The present-oriented side is explained in terms of Boundary Critique Theory and Relevance Theory. The future-oriented side is explained on terms of complexity theory. The present-oriented side helps to describe how the actors arrive at some

particular situation, and the future-oriented side helps to answer why the actors arrived at that situation. Consequently, it is show that both sides of intention provide different and complementary perspectives of an intervention process.

The empirical component guides but also provides grounding to the reflection on the other dimensions. For this part of the work, I followed a team of Action Research practitioners. I interviewed, attended their meetings, and read documentation related to their work projects. Based on these I also provided some feedback that was requested as part of my arrangement with the group. These terms allow me the possibility to reflect not only about the intention of my participants but also about my own.

This introductory chapter is structured as follows: First I present some personal antecedents and the reasons that led me to this research. Next I explain the research process that was conducted. Then I explain why the research is important for MS/ST. Finally I present the overall structure of the thesis.

1.2 My Antecedents and Why I am Interested in Intention

My interest in intention came from the idea that actors are central and their role is decisive in how tools are used. My own experience as a computer programmer, information technology manager and academic has convinced me of that. On many occasions regardless of the aforementioned practice's domains, I saw always the possibility to adapt the tools at hand. It does not matter if they were for developing software as in my earlier experiences or MS/ST methodologies in my later career.

It felt strange when I started on my Master's degree to study some of the ideas on MS/ST. On one side, the arguments about the right way to use a tool and/or the right context for their application always inspired me additional ways for application. However, it just did not seem desirable to circumscribe their possibilities to a prescription. I always felt that it was possible to be flexible when dealing with computer programming. It was possible to produce a solution using the tools in many different ways. Consequently, I did not see why this was not applicable even in a greater extent to human activity systems.

In my development as an academic I saw different ideas that were supporting my intuition. For instance, you can be pragmatic, change the aim of truth or central criteria to judge situations (the standard), for "an attempt to serve transitory purposes and solve transitory problems" (Rorty, 1999, p.xxiii). You can be critical as Foucault (1982), and distrust the idea of objectivity and value free knowledge. You can be interpretative and accept that objectivity is not enough for understanding human action, and that meaning and intentions are fundamental (Schwandt, 2000).

A very important influence on my ideas was constructivism and those branches close to systems thinking, such as Second Order Cybernetics, Radical Contructivism and Autopoiesis. In first order cybernetics the purpose of the system is given by a higher order or external system. In second order, the system can define its own purpose. Accordingly, for Von Foerster (2003), human social systems need to be understood from this perspective, because humans can define their own purpose. Radical Constructivism goes farther stating that "observations are made by an experiencing subject and therefore depend on that subject's ways of perceiving and conceiving" (Von Glasersfeld, 2003, p.7).

On similar lines Maturana and Varela (1992) develop the theory of Autopoiesis. In his theory of the observer Maturana (1988) states that human beings cannot have direct access to reality. What we can do is to construct with others agreements about it. There is not a way to establish what is ultimately real. On this view defining a standard for a methodology is just a convention, and the convention could be the other way around, namely not having a standard.

One important aspect of Autopiesis theory is language (Maturana & Varela, 1992). Language is not a series of symbols that have a correspondence with objects or action in the "reality", but simply an elaborate way in which complex organisms can co-ordinate behaviour in recurrent interactions. The power of language is that it enables the user to use past elaborations in language to construct more elaborate co-ordination of behaviour with others or even with ourselves. It is through language that we can create complex co-ordinations of behaviour such as intervening and using tools.

Autopoiesis triggered my interest on language (Vélez Castiblanco, 1999). On this path, I discovered Wittgenstein's (2001) idea of conceiving language as a tool. Accordingly, the meaning of a word is not intrinsic. Its meaning derives from the use that we gave them. I wondered if this idea could be applied to conceptual tools. If so this could be a way to show that actors intrude on the supposed objectivity of the tool when applied.

Taking the decision to explore intentions on this research is a step on the way to how by our intentions, actors can produce different uses on their tools. Based on Wittgenstein's philosophy, different uses imply that in action, the tools will obtain different meanings and possibilities. Finding ways to enhance our possibilities in an intervention can be seen as the intention triggering the research.

Note that Wittgenstein's ideas impose on me a caveat. At the end of the research, I will not find the true meaning or nature of intentions. I will just develop another tool, another "language game". It is not about finding a final solution to the problem (Fogelin, 1996). Consequently, the aim of my research is not the search for the essential nature of intentions. This cannot be done from Wittgenstein's perspective. Instead, this is a search for useful ways, for tools to understand intentions in MS/ST practice.

1.3 Exploring Intentions on Intervention

My research process involves a conceptual component (reading about intention in philosophical and theoretical literature) and an empirical component (fieldwork, interviewing, witnessing meetings and giving feedback to my participants about their work). This is mediated by my reflections about the whole process, not only while on the field but also after my involvement with the Team Of Practitioners (hereafter referred as TOP) was done. The interplay of concepts and empirical experiences provided me with ways and ideas for inquiring, making sense of the data, and developing my understanding of intention.

One fundamental part of this research is the constant testing of ideas about what intention could be. The testing involved matching explanations derived from different

ways to understand intention in philosophy and theory with events on the field. These events referred to my own actions, those of others and the interactions with my research participants. In those interactions, my participants even help me to evaluate the usefulness of the explanations for practice.

Broadly speaking this process matches a deductive logic (Blaikie, 2000, 2007) in which the researcher formulates hypotheses about a phenomenon and then seeks disconfirming empirical evidence. Hypotheses that survive this process are then considered better explanations of the phenomenon than those that are rejected. The process of formulating the hypothesis in itself can be considered hermeneutic. "The meaning of a part can only be understood if it is related to the whole…Conversely, the whole consists of parts, hence it can only be understood on the basis of these" (Alvesson & Sköldberg, 2007, p.53). In this way, I was producing understanding on the matter reflecting on the overall experience and its relations to the "parts" of it. The understanding was then put to the test.

The overall research process is illustrated on Figure 1.1. The figure shows a two-part research process. The first part refers to activities carried out when on the field. The distinctive features here were the feedback sessions delivered to the group. These served as converging points of the different research activities such as interviews, attendance to meetings, or theoretical readings. The information produced by these activities was used as the topics for discussion on the feedback as it is shown on the figure on the left side of the feedback square. The input at the top of the feedback boxes shows ideas used to inform the way to conduct the session. The bottom side of the feedback squares shows the learning about the session that flows to help in the conduction of other feedback sessions. Detailed descriptions about this part of the research can be found on Chapter Five.

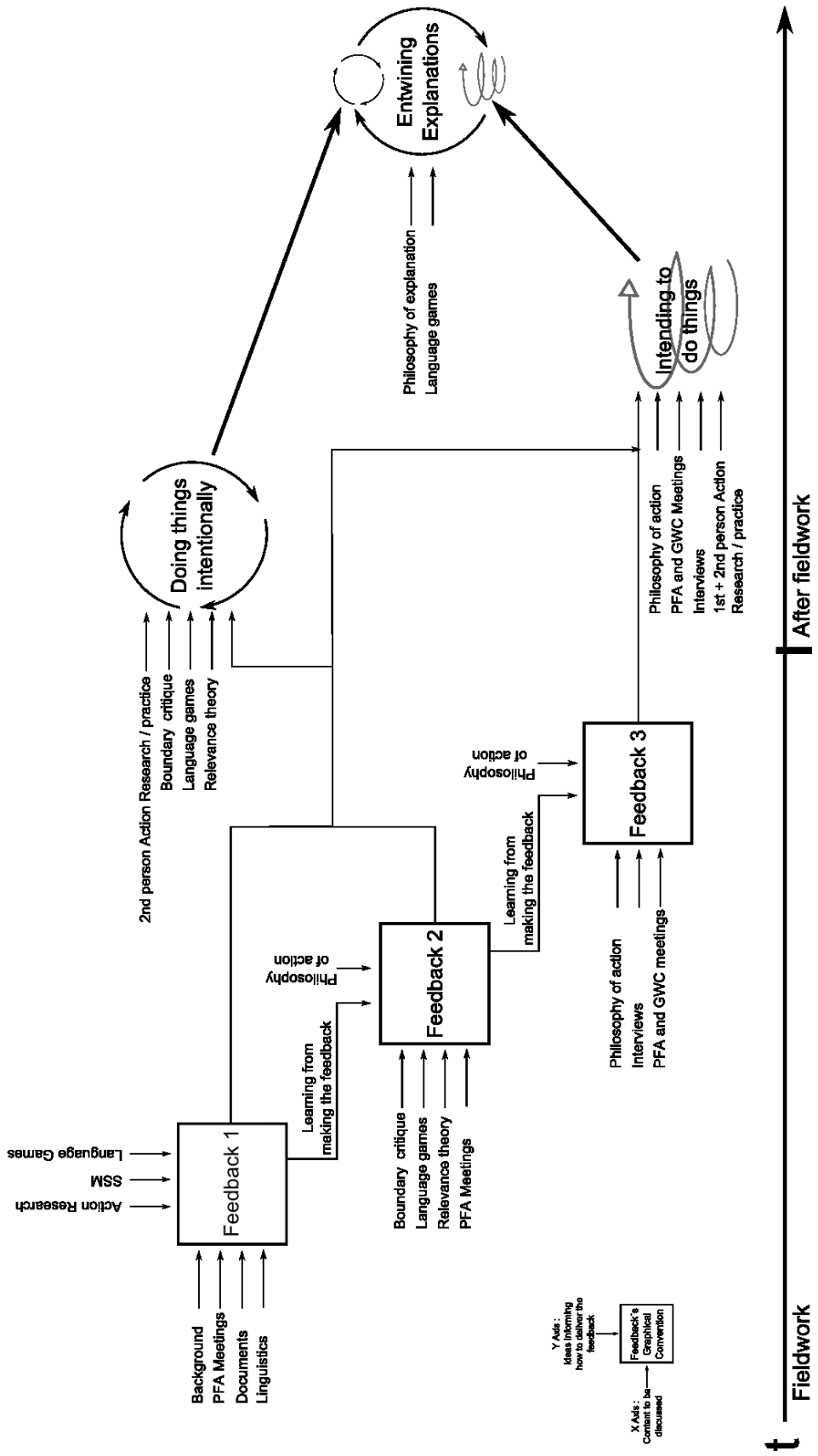

Figure 1.1. Overall research process.

The output of the feedback sessions (how the mixtures of ideas worked out) is part of the input for the work carried out in the second part of the research, after the fieldwork. The work involved reflecting in a series of cycles about the experiences and the ever increasing amount of theoretical readings. In this part, the work was progressively making sense and integrating all the aspects explored about intention in this thesis. The diagrams and names of the intermediate reflecting processes (doing things intentionally and intending to do things) match the contents in Chapters Six and Seven.

In the following subsections, first I briefly introduce the empirical work carried out (the fieldwork part of the research on the Figure 1.1). Then, I identify relevant philosophical and theoretical ideas used to guide my formulation of the intention's concept. Although, this work was initiated on the field, most of the achievements were obtained as an outcome of my reflections after the fieldwork.

1.3.1 The Empirical Work

The key participants in this research, TOP are a team of ten researchers. Members of this team are experienced in dealing with social issues and working towards improving the conditions of communities in New Zealand. Crucially for my research they were using, among their intervention tools, MS/ST methodologies such as Soft Systems Methodology (Checkland, 1981), Creative Design of Methods (Midgley, 2000), Theory of Constraints (Davies, Mabin, & Balderstone, 2005), Systems Dynamics (Rouwette & Vennix, 2006), and Critical Systems Heuristics (Ulrich, 1983).

There were some characteristics that made TOP an especially good setting for this research. They were informing their intervention with MS/ST, and they asked my feedback as compensation. This last aspect pushed me to look for ways to make the research relevant for the improvement of their work, and I was encouraged to intervene as well. Additionally, they were reacting and commenting about the quality of my feedback. I was also receiving feedback. Part of this feedback was used to improve the feedback sessions themselves, and part was feeding later reflective

process as shown in Figure 1.1. Having TOP to crosscheck and improve the ideas developed, was for me an important asset for the research.

Because the team was intervening with its various participant communities, and I was intervening with my feedback, I could contrast their understanding and my understanding on the actions and intentions. Their understanding was mainly based on experience. My understanding was initially based on the literature. In fact, I was even drawing from the literature on intention to present my feedback to the group. In this way, I was evaluating the relevance and usefulness of these ideas for TOP.

The characteristics of intervening and reflecting on their and my actions enabled me to draw parallels with Action Research (Dash, 1999; Dick, 1993; Fals Borda, 2006; Reason & Bradbury, 2006c). Action Research is a family of approaches that follows a process in which initial ideas about a situation are used to intervene, and then, in successive cycles, these ideas are refined by reflecting on the taken actions and their effects (Dash, 1999). Under this view, Action Research resembles the iterative process of deduction mentioned above. In Figure 1.1 it can be seen that there were three feedback sessions corresponding to two learning cycles.

Drawing from the idea of Action Research also allowed me to support the intervention process and my data collection on the feedback sessions, using other methods (Reason & Bradbury, 2006b). Accordingly, I draw from interviews, transcriptions of recorded meetings, and documents produced by TOP accordingly to the feedback as is shown on Figure 1.1.

In the interviews, I looked to understand the stance of each one of the participants regarding intervention and the use of tools. In addition, I looked at how they were making sense of their intervention process. In their meetings, I was allowed to make audio recordings that I complemented with notes about the interaction. This proved to be important to reconstruct the way in which their intervention process was evolving. Additionally, I used documentation generated by TOP such as reports, plans, reflections, papers and emails.

It is important to note that Action Research was not the only set of ideas that I sued to inform the feedback sessions. As is shown on the Y axis of the feedback boxes on Figure 1.1, I also used ideas from a methodology call Soft Systems Methodology (explained on Appendix 5), and ideas from Language Games in Wittgenstein philosophy as is explained in more detail on Chapter Five.

Although my research is not a full blown Action Research project, it does resemble it. The difference can be noticed pointing out that Action Research is participative (Coghlan & Brannick, 2001), and consequently, involves a research problem that concerns the whole team. However, I started by researching TOP on an issue of my concern; the research was *on* them not *with* them (Herr & Anderson, 2005).

Nevertheless, I always made the effort to make my feedback relevant to TOP's work. I was looking to contribute to their work. I also benefited from their feedback to my research but also as a professional interested in research. We engaged in a mutual learning relationship. At the end of my engagement my relationship with them was more one of a participant than an observer.

1.3.2 The Philosophical/Theoretical Work

Since the fields of MS/ST have not themselves focused on understanding intention, in order to delve into and better understand this concept I had to look elsewhere. My background and investigations led me to philosophical and theoretical explorations. Especially I used Language Pragmatics and Philosophy of Action. Wittgenstein's role as a precursor of both fields weighed importantly for the decision of use them.

Language Pragmatics studies meaning in relation to how language is used. This is in line with the notion of a language working as a tool and in general with the importance of Wittgenstein as "philosopher of language use" (Kopytko, 2007, p.792). One of the central concepts is that every use of language implies locutionary, illocutionary and perlocutionary acts (Bertucelli Papi, 1996). The locutionary involves the technical problem of producing the communication (phonetic, syntax). The illocutionary, the force and intention put on it, is the one that let us use a word such as 'hello' in a welcoming, neutral or threatening manner. The perlocutionary

refers to the effects produced on others. It can be seen then that Language Pragmatics is identifying intentions as an intrinsic component in the use of language.

This research employs a branch of Language Pragmatics that is known as 'Relevance Theory' (Sperber & Wilson, 1995). Relevance Theory considers that the main problem for communication is the "expression and recognition of intentions" (Wilson & Sperber, 2002a, p.249). Additionally, it explores the links between intentions and their effects. This is important because the purpose in this thesis is to look for ways to understand how intentions can be pertinent or applicable to interventions. This theoretical exploration supports the reflection on "Doing things intentionally" as shown on Figure 1.1. This reflection cycle is explained on Chapter Six, where is also expanded how other philosophical and theoretical perspectives such as Boundary Critique and Language Games were also involved.

The second field, 'Philosophy of Action' is a branch of Philosophy of Mind (Ginet, 1989; Mele, 1992, 1997b; Searle, 2004). A useful way to describe its central question is through the aphorism: "What is left over if I subtract the fact that my arm goes up from the fact that I raise my arm?" (Wittgenstein, 2001, §621). As Mele (1997a) points out our actions are interesting because they carry intentions. Actions without intentions are merely bodily movements. This theoretical exploration supports the reflection on "Intending to do things" as shown on Figure 1.1. This reflection cycle is explained on Chapter Seven.

There are many approaches to trying to explain the nature of intentions in Philosophy of Action. Two ideas were important for my process of sorting out how to approach them and establishing links with Language Pragmatics. In other words, they were important for deciding the initial two reflecting processes after the fieldwork shown on Figure 1.1. One is that intentions are not a single phenomenon. They can be conceived as a two-faced phenomenon. "We do things intentionally, and we intend to do things" (Bratman, 1997, p.178). There is an aspect of intentions that is directed to the present and one that is directed to the future. The two faces of intentions are the major themes of the research.

The second idea is that it was easier to approach intentions through their perceived usefulness. According, to the Philosophy of Action they have a variety of uses (Baldwin & Baird, 2001; Enç, 2003; Mele, 1992). They enable us to make sense of, explain and rationalize our actions and those of others. They are fundamental in helping to coordinate the interactions between groups of agents. Finally, they can cause, sustain and guide action. These ideas about what intentions are useful for, help to flesh out the workings of present and future faces of intention and make easier to establish their relevance for intervention.

After working out, both sides of intention there comes a final synthesising reflection effort. "Entwining explanations" as shown on Figure 1.1, combines both threads of discussions on intention, mainly with the help of philosophy of explanations. The basic argument is that both threads correspond to different kind of explanations that can complement each other. This last reflection is developed on Chapter Eight.

1.4 Why It Matters for Management Science/Systems Thinking

Authors on the field such as Churchman (1979), Ulrich (1983) and Checkland and Sholes (1990) have pointed out the importance of intentions for intervention. However, their work does not develop the notion. Additionally, core concepts in the field such as methods, methodologies and the idea of there being a 'standard use' are suggestive of the notion of intention. This situation points out a first reason for studying intention: the concept is just taken for granted and, consequently, there is a gap in the knowledge.

A second reason for studying intentions follows from what potentially intention can do to the actions and tools applied in the intervention, namely change them. This becomes important when it is considered that flexibility and creativity have been recognised in MS/ST as crucial for tackling complex situations (Jackson, 2003b; Midgley, 2000; Mingers & Brocklesby, 1997; Ormerod, 2002; Rosenhead, 1980; Torlak, 2001).

Because problem situations can be very complex, no methodology can deal with every possible scenario. Consequently, practitioners need to react and adapt (Midgley, 1989; Ulrich, 2001). They need to be flexible to adapt/bend the rules of the tools used. They need to be creative to conceive whole new meanings and uses. Figuring out how intentions affect, modify and change a tool or action can be a way to understand how to obtain more flexible and creative uses.

A third reason for studying the effect of intentions on interventions is to produce new kinds of intervention accounts for learning about the process. The current dominant way to tell those stories in MS/ST is through methodologies. However, this leaves actors out of the picture. What it is pursued here is to weave those intervention stories in relation to intentions. Centring those stories on intentions can let us incorporate and reflect on the actions guided by formal tools, any kind of action, and of course, actor's perspective.

Intention is a topic close to the interpretative tradition (Schwandt, 2000). From the interpretative point of view, the goal is to understand how subjective reality is constructed. "This is often referred to as the principle of *verstehen* (Weber, 1949) whereby understanding meaning and intentionality is emphasized over and above causal explanations" (Prasad, 2005, p.14). What matters is to identify the meaning or intention that actors are attaching to their actions.

From the point of view of Philosophy of Action, our actions are interesting because they carry intentions; actions without intentions are merely bodily movements (1997a). From this view what is interesting about the tools used in an intervention is not how they lead actions but how they interplay with the intentions and meanings of the actors using them.

My final reason for studying intentions, the ethical, is perhaps the most important. If the practitioner's intentions do not matter in the intervention, methodologies will have the central stage for the understanding of intervention processes. If, on the contrary, their intentions have effects, it will mean that methodologies are not objective tools. It will mean that actors and how their values affect the use of those tools need to be

accounted for. This implies giving the practitioner a more central role in the understanding of the intervention process.

The literature (Kay & Halpin, 1999; Romm, 2001; Taket, 1994), has identified problems that arise from MS/ST practice when methodologies are emphasised at expenses of the actor/practitioner. For instance, methodologies can be presented as scientific. Consequently, through their use, power exercises are seen as applied rationality (Rosenhead & Thunhurst, 1982). Alternatively, they can be presented as a tool that takes decisions without the intervention of the actor, serving as a kind of scapegoat for the manager's decisions (Beer, 1994). In both cases, the methodology is manipulated, in one case to pursue some particular interest and in the other to evade responsibilities.

The topic of how intentions play a role in interventions can show that the use of a methodology is not neutral, that partly, it depends on the actor. Consequently, people can be more aware of how the methodology can be used to pursue some interest or for evading responsibility. What is more, as an actor applying methodologies, I can be more aware of how my own biases affect the way in which I use them.

"How individuals think critically about dealing with potential ethical dilemmas remains unexplored" (Córdoba, 2006, p.1028). This is another gap in our knowledge in which the topic of intention may open ways for exploration.

1.5 The Structure of the Thesis

The thesis is organised in Three Parts (Figure 1.2). The First Part establishes a conceptual framework underpinning the research. This covers the disciplinary area MS/ST to which thesis aims to contribute (Chapter Two), the research methodology (Chapter Three) and the philosophical basis for understanding intention (Chapter Four). The Second Part involves a single chapter presenting the empirical part of the work on the field (Chapter Five). In the Third Part, each chapter (Chapters Six, Seven and Eight) discusses elements of the fieldwork and advance contributions.

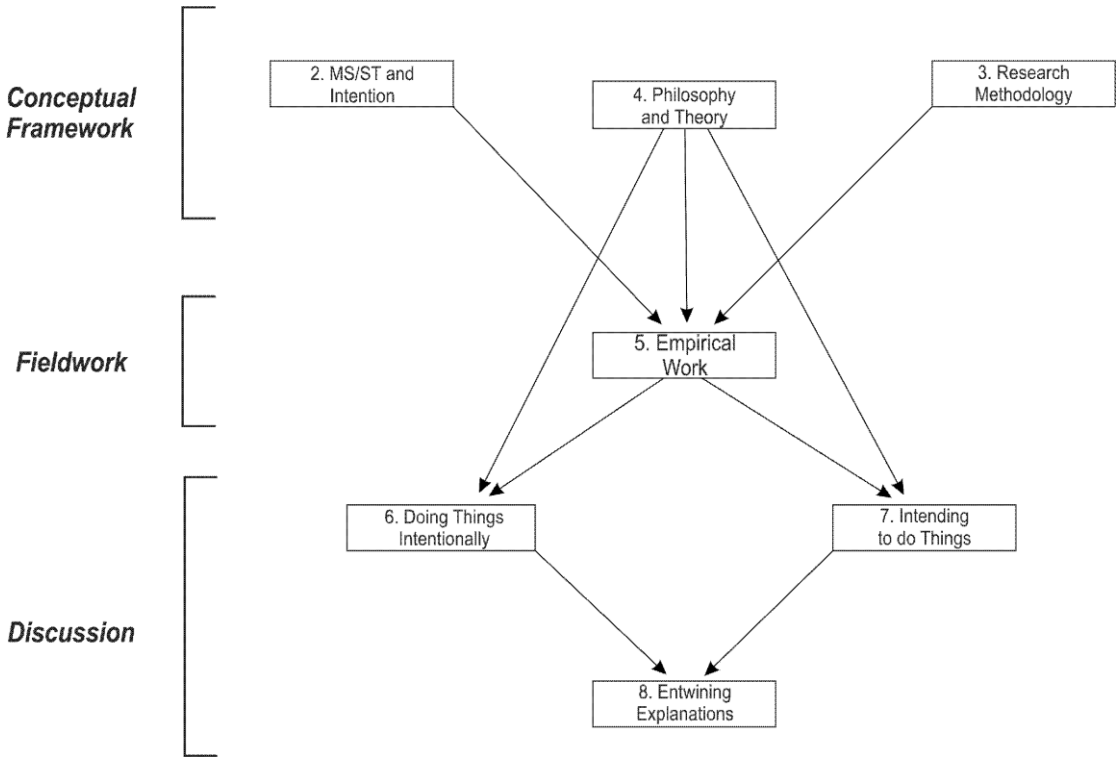

Figure 1.2. The Structure of the Thesis.

Let me now briefly introduce each chapter. Chapter Two introduces the field of MS/ST. Some of its branches are presented, especially the Boundary Critique Theory, an important piece of the argument here. Additionally, the core concept of methodology as a way to learn about interventions is examined. Next, it builds the case of the importance that intention has for the field. Because the topic in itself has been underdeveloped, its importance is shown indirectly.

For instance, standard and non-standard uses of methodologies make use of the concept of intention (although intention in itself is not developed). Nevertheless, this provides openings to introduce the importance of intention. Other openings are ethics and alternative ways to learn about the intervention process. Both offer opportunities to introduce actors and their circumstances in the intervention process. Additionally, it is shown the gap in the MS/ST literature, and the research questions towards filling the gap. Finally, this chapter presents Wittgenstein's philosophy as a foundation to understand an MS/ST intervention process. This allows conceptual space to consider actors and with them, their intentions.

Chapter Three (Research Methodology), considers how to approach the research. It presents my first approaches with my participants on the case study site. Then, based on those characteristics and on the research problem, it shows how I decided to approach them. The basic idea was to combine an empirical and a philosophical/theoretical exploration, and in this way learn about intention contrasting the different sources. This approach involves the logic of deduction as well as tools drawing mainly from Action Research. The chapter also deals with my stance as a researcher, my ethical guidelines, the literature reviewed and a justification of the narrative voices used in the thesis.

After showing how to approach the empirical, Chapter Four shows the philosophical and theoretical foundations for the exploration. Two paths are presented. One derives from philosophy of language and is based on Language Pragmatics and specially the Theory of Relevance. The other is based on Philosophy of Action. It shows intention as a two-faced phenomenon with present and future oriented faces. These faces are proposed as the organising themes of the research and are developed in Chapters Six and Seven.

In the second part, Chapter Five describes the research procedures. This description works as a central hub. It gathers ideas from all the previous chapters showing how they were actually performed in practice and is the foundation for later chapters. It complements the methodology on Chapter Three. Following Holliday (2007), on one hand, Chapter Three defines how I planned to carry out the research before my involvement on the field. On the other hand, this chapter presents an account and catalogue of what was actually done. The account shows how the work used MS/ST and Language Games ideas (Chapter Two), and it shows the activities carried out to test and develop the ideas on intention introduced on Chapter Four. Finally, it shows how I proceed to organise the data, and the learning gained on the field.

Moving now to the third part of the work, Chapter Six develops ways of understanding how we do things intentionally. Here I am relying in understanding language as action as in Wittgenstein philosophy. On this base, I show how these actions can have effects on what is considered relevant in a situation. I call this approach, boundary games, a synthesis of ideas in Relevance Theory and Boundary

Critique Theory. It draws heavily from the analysis of interactions of the field (Chapter Five) and the ideas about the present directed intention (Chapter Four).

Chapter Seven shows the process that I followed to arrive at a way to understand how we intend to do things. Here different alternatives introduced in Chapter Four are confronted against my own experiences on the field (Chapter Five). At the end, to understand this face of intention, I combine ideas from complexity theory and Philosophy of Action. Consequently, the future-oriented intentions are understood as emergent complex adaptive systems.

Chapter Eight works on how to combine the views on intention in Chapter Six and Seven. It argues that they are different kind of explanations that are needed to have a better picture of how intentions intrude on interventions. Finally, Chapter Nine the concluding chapter shows how the work answers the proposed questions, summarizes the arguments, examines what is the overall contribution of the thesis and proposes possible future research.

PART ONE: CONCEPTUAL FRAMEWORK

Chapter 2 Management Science/Systems Thinking and Intentions

Exploring the overall importance of intentions in Management Science/Systems Thinking interventions was presented as the purpose of this thesis in Chapter One. The task is now to build some foundations in order to carry out the research. This chapter starts the process by focusing on the field of knowledge to which this research aims to contribute and the current place of intention in it.

Management Science/Systems Thinking (MS/ST hereafter) is a label for a field that is referred to in different ways. Sometimes it is described using individual labels such as Operational Research (OR), Management Science (MS), Systems Thinking (ST), or various combinations of these such as OR/ST, MS/ST and OR/MS. The label 'OR' stresses the origins and tradition of the discipline. The label MS stresses the relevance to a specific kind of activity. ST emphasises a way to approach the problems.

As Midgley (2000) points out, every history has a point of view. Here, the point of view leading to use of the label MS/ST is based on writers from the Critical Systems Thinking tradition. It follows ideas from authors such as Jackson, Keys and Mingers (Jackson, 1982, 1987, 1990; Jackson & Keys, 1984, 1987; Keys, 2002a; Mingers, 1992, 1997a, 2000, 2003).

The combination used in this thesis MS/ST stresses two sets of ideas. The first draws attention to the broad aim of the discipline, which is to assist stakeholders in managing situations that are perceived as problematic through the use of models. Models are seen a "way in which human thought process can be amplified" (Churchman, 1968, p.61), and although the use of mathematics is frequent in this model, they are not restricted to this. Second, a holistic approach is employed in helping to make sense of these situations. These two sets of ideas are explained in the first part of the chapter.

Then, there is the problem of intention. Although mentioned, intentions are not directly managed by the MS/ST literature. Consequently, I take indirect routes: methodology and their standard and non-standard use, and ethics. Methodologies are a core concept in MS/ST. They are used among other things to codify the learning about intervention. Additionally, methodology is based on the concept of intention despite the fact that the concept in itself is taken for granted. The main argument here is that standard uses are unlikely and that actors and their intentions could be one of the reasons for this. Ethics is included because it suggests that actors have a say in how an intervention process develops. If they do not, ethical discussions would not be necessary.

The indirect arguments show that there is a place for intention and that perhaps learning about the intervention using methodologies without taking into account the actor is limited. Although there are arguments about the need of standards in order to learn of the interventions, they are not the only way to gain knowledge of the process. It is suggested that intentions can contribute to these other ways to learn about interventions.

All this suggests a gap in the knowledge; this gap is then used as a base to propose the research questions. The main idea is that the knowledge about intentions in the field is underexplored so it is necessary to develop ways to approach the concept to make it pertinent and useful for MS/ST.

The chapter ends showing the concepts of Language Games in Wittgenstein's philosophy and how they can be a foundation to think about interventions in MS/ST considering actors and their intentions.

2.1 Systems Thinking

Systems Thinking is usually defined in contrast to Reductionism (Checkland, 1981; Flood & Jackson, 1991). The basic idea of Reductionism is to split complex phenomena into their component parts, with the aim of understanding these independently of one another. The aim is to find the essence that defines and lets us

have an understanding of the thing itself. Consequently, everything that is not the thing itself is ripped out as not essential, including the observer (Fuenmayor, 1991a).

Following Fuenmayor (1991a) reductionism can be described as a process of establishing and shrinking boundaries around an object of study. The process reduces this object to an essence. Having the essence, reductionist science ideally looks to express it in mathematical terms.

Whereas Reductionism goes for the essence, Systems Thinking proceeds in the opposite direction. If reductionism is about shrinking boundaries, systems thinking is about expanding them and understanding things in a context, part of which includes the observer (Córdoba & Midgley, 2006; Churchman, 1979). However, this process is tricky because boundaries cannot be expanded forever, so a big concern is how to stop the expansion of boundaries before losing sight of the object of understanding (Ulrich, 1983). The other problem with this process is that sometimes this expanding boundary does not include the observer (Midgley, 2000). This is a problem that some systems thinkers, particularly those working within the second-order cybernetics tradition such as Von Foerster (1989), Von Glasersfeld (1996) and Maturana (1988), believe is essential and are particularly keen to emphasise.

When objects and/or situations are observed using systems thinking, relationships between the different components and observers have to be considered. Observers co arise with the world that they are trying to understand (Maturana, 2000). When boundaries are expanded instead of essences, the search is for patterns and for emergent properties that arise from the interactions of all the components, including us as observers (Georgiou, 2007).

This particular systemic way of approaching and thinking about situations extends beyond any particular field. Systems thinking has been used to think about different disciplines (e.g. biology, geography, physics), to study systems in their own right (e.g. cybernetics, autopoiesis, chaos theory, general systems theory) and for problem solving (Jackson, 2000). Here, the focus is on this third use, problem solving, especially under the name Management Science which is the focus of the next section.

2.2 Management Science

One of the defining features of Management Science is that it nearly always involves constructing and using models of some kind (Maani & Cavana, 2000). However, what these models are taken to represent how they are constructed, the information that is used and the purpose that is pursued with them varies (Mingers, 2003). What is constant is that they are used as a basis for some intervention. That is to say, they are devices or tools that play a key role in "purposeful action by an agent to create change" (Midgley, 2003, p.77). For example, models in MS can help tackle perceived problematic situations such as those in the organizational processes, in the organizational structure, the organizational culture or dealing with issues of power and conflict (Flood, 1995).

It is important to note that the name Management Science does not limit the activities to commercial organizations. In fact, the need to manage also extends to the public sector, consumer groups, political parties, charities, resident associations (Rosenhead, 1986), the community (Wong & Mingers, 1994) and lately the environment (Alvarez & Emery, 2000).

The next section provides a brief historical description of some of the branches in MS. The aim is to show some of the breath and extension of the field as well as its constant evolution.

2.2.1 Classic Operational Research

Contrary to many disciplines, the origins of OR are very easy to track down (Keys, 1991). The early stages of the discipline are linked to the British Second World War efforts from 1935 to 1945. The term OR itself started to be used in 1937. At that time, the military was employing different groups of scientists. Some of them were developing technologies such as radar. However, using radar in an effective way required new and interdisciplinary approaches from the scientists.

The distinguishing feature of these new approaches was that they were concerned not on the machine in itself but about the best ways to manage the operations around the

machine. So the label "'Operational Research Section' was a natural choice" (Keys, 1991, p.13). In the case of radar, the operations included elements such as direct observations, location diagrams, information filtering systems, operation rooms, tactical purposes, strategic purposes, coordination, men, and squadrons. The problem to solve: "to find out how best to use the radars in what we would now call the total systems for intercepting and destroying enemy aircraft" ((E. C. Williams, 1968) cited by Keys (1991, p.13)). The activities were perceived as successful and, consequently, they expanded.

The methods used by the Operational Research Section to confront this task were based on the scientific method: observation, analysis of mainly quantitative data and experiments to support the conclusion of the analysis. As a matter of force the experiments were not carried out in laboratories but in the field (Keys, 1991). These experiments were, in fact, what would now be called interventions.

After the war, some of the scientists who were working for the military started to work for industry. They were applying the ideas of Operational Research to problems in organizations. Exploration and problems such as organizing shipping schedules, accident prevention, production planning, and control systems, were characteristic of this transition (Keys, 1991).

Over time, some recurrent problems were found, so standard techniques and methods were developed to deal with them. They were aimed at problems such as inventory processes, allocation processes, waiting-line processes, replacement processes, and competitive processes. The models and solutions produced for these problems draw from mathematics ranging from probability, calculus to game theory. The reliance on mathematics is a defining characteristic of what is now called 'Hard OR'. Because mathematics and the models are seen as objective, there is no need to take into account an observer.

At this time, the influential book *Introduction to Operations Research* by the key authors Churchman, Ackoff, and Arnoff (1957) presented the first comprehensive list of problems and models used, and additionally a general methodology for 'Classic OR'. The way in which the methodology is pictured, shows OR as a problem-solving

process. Central to this methodology is the use of mathematical models to represent and predict possible actions in the context of the situation. The stages of the process were defined as: problem formulation, model construction, solving the model, testing the model and the solution, establishing controls over the solution, implementing the solution.

During the 1950s OR began to consolidate thanks to OR groups, publications and instruction. Around this time there were efforts to expand the initial concerns of OR, and the label Management Science was applied to these efforts. However, in the 1960 both labels and both disciplines generally were seen as the same (Daellenbach, 2002).

2.2.2 Soft Systems Thinking

Toward the 1970s there was the perception among some practitioners that the discipline was in crisis (Keys, 1987). The initial interdisciplinary character was lost in mathematical prowess. Additionally, the Classical OR approach was criticised for its weakness when dealing with the human aspects in organizations. This was due to the use of single uncontested representations and the assumption of always legitimate decision makers (Ackoff, 1974, 1976, 1979; Rosenhead, 2006; Rosenhead & Thunhurst, 1982). Single representations excluded the possibility of different views and, therefore, participation. The assumption of always legitimate decision-makers helped to perpetuate unfairness.

Consequently, new approaches allowing different perspectives, qualitative information and the possibility to contest the assumptions on the intervention's conditions were developed (Eden, 1982; Jackson, 1987). From this perspective, there is space for subjectivity and with it for the observer. Contrary to the classic OR, here on many occasions the problems are ill structured and defined.

All these characteristics required a shift in the way in which problems were tackled. The move was from a functionalism to an interpretative paradigm (Jackson, 1982, 2000). In classic OR (functionalist) the boundaries of the system were seen as given by the structure of reality. Now it was important to see that these boundaries were social and personal constructs (Midgley, 2000).

The focus now, at least in the first instance, was to structure problems and construct relevant boundaries. Hence, these approaches are also known as problem structuring methods. The system idea moves from using models as representations of reality to models as devices to encourage debate, negotiation and agreement (Checkland & Sholes, 1990; Eden & Ackermann, 2006).

> These approaches retain the traditional MS/OR reliance on rational analysis and the use of representations to capture the meaning of situations. They differ in that the data used within the representations are qualitative and consequently the tools and analysis are non-mathematical. (Keys, 2002a, p.140)

2.2.3 Critical Systems Thinking

The 1980s brought new concerns to the MS/ST community. One concern was that methodologies were perpetuating unfair social situations, strengthening powerful stakeholders at the expense of the weak. Soft OR was ignoring social and political structures (Brocklesby, 1993; Jackson, 1982; Mingers, 1992). A second concern revolved around a big increase in the number of methodologies. This diversity not only in the number but also in the theoretical and philosophical underpinnings was seen as a weakness.

On this background, Critical Systems Thinking emerges not as a consensus about what it is but as an "evolving debate around a set of themes that are considered important" (Midgley, 1996, p.12):

> • Critical awareness — examining and re-examining taken-for-granted assumptions, along with the conditions that give rise to them
> • Emancipation — ensuring that research is focused on "improvement," defined temporarily and locally, taking issues of power (which affect the definition) into account
> • Methodological pluralism — using a variety of research methods in a theoretically coherent manner, becoming aware of their strengths and weaknesses, to address a corresponding variety of issues. (Midgley, 1996, p.11)

Ulrich (2003) identifies two strands. The TSI strand focuses on developing frameworks to make informed choices of methodologies and take advantage of the diversity of methodologies and methods, seeing diversity as a strength not a weakness (Jackson & Keys, 1984). These frameworks look to be exploit complementarism and pluralism. Complementarism looks at meaningful ways to support the weakness of

one approach with the strengths of others. Pluralism is not necessarily looking for coherence but emphasises that the different nature of the approaches provides different views to inform action (Zhu, 2006).

Overall, the argument is that one strategy cannot win in every scenario. Having alternatives lets us choose what is the best way to tackle a problem or if there is none, how to tailor one. Some of the frameworks produced for this tradition are explored with more detail in relation to the standard use of methodologies in Section 2.4.2 for this reason now I turn to the second strand.

The second strand, is called Critical Systems Heuristics by Ulrich (2003). Although Ulrich seems to argue that his position is too different to other contemporary efforts in CST, there is the alternative view that he is part of what Yolles (2001) calls Boundary Critique Theory, view that will be use here.

The theory of Boundary Critique can trace its roots to Churchman work and especially his understanding of boundary. "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).

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.

On this basis, Ulrich develops the notion of Boundary Critique. The aim is "to make visible the ways in which any specific claim 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 Chuchman's ideas of Boundary and couples it with the critical philosophy of Habermas, an approach to

develop theoretical approaches to improve the conditions of others (Brocklesby & Cummings, 1996, p.741).

Ulrich (1983) assesses the boundary of a system through twelve critical questions. The questions explore sources of motivation, control, expertise and legitimisation. 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.

Midgley's work builds up from Churchman and Ulrich. Philosophically, he uses Whitehead's process philosophy to show that any attempt to gain knowledge requires first a judge about the boundary. How or on what we gain knowledge depends on how boundaries are marked. On the intervention side, Midgley focuses on the problem of marginalisation, namely how actors are included, excluded and the resultant conflict. He uses Douglas's sociological work to show how different groups of stakeholders mark different boundaries making some elements and values important or not, in Midgley (2000, p.143) terms "sacred or a profane status" is imposed.

The issues of inclusion and conflict have been later expanded by authors such as Yolles (2001) and Córdoba (2007). The first draws from Management Cybernetics while the second does it from the biological ideas of Autopoiesis. Both aim to expand the explanatory power of the theory and the possibilities to guide interventions.

Boundary Critique is important for this research because independently from the way in which an intervention is informed, even if boundaries are not explicated used to reflect in the situation, every intervention process is conditioned and change them. This will offer in later chapters ways to link Boundary Critique with intention, establishing a conceptual space in MS/ST for the contribution.

2.3 Methodology

As has been mentioned, MS/ST interventions involve the use of models. Learning from them involves discerning technical aspects of the process of "how models constructed using MS/OR techniques are built, validated and used in the situations

they aim to represent" (Keys, 2002b, p.212). These aspects are collected and expressed by statements or methodologies. MS/ST learning is codified in methodologies.

Despite it being a vital element in MS/ST practice, the concept of methodology is frequently misunderstood. Many meanings are attached to the word, some of which are somewhat contradictory. Lehaney and Vinten (1994) show that the term is currently applied in MS as: scientific methodologies, ways in which techniques are chosen, ways in which problems are chosen, method or techniques, modelling process and chronological planning of events.

Here I will discuss the concept to clarify it and show that intention appears as one of the supporting ideas for the notion of methodology.

2.3.1 Tracing the Term

The roots of the term methodology can be traced to Greek language, not directly as methodology but as method (Kotarbiński, 1966). The concept of method has suffered many transformations. It started as "the path of a person who follows or pursues another person". Later the meaning changed to a path to something, or the way to do something. In a more modern interpretation, it is "expert behaviour in the field of analysing, bringing out ideas, formulating one's thoughts" (Kotarbiński, 1966, p.439).

Kotarbiński (1966, p.446), defines method as: "a mode of action used with the consciousness of a repetition of its application in similar cases". It refers to actions from which we are aware of their potential to be used repeatedly. Actions can be described in innumerable ways. In a method "All the respects which play a role in determining the method used in a given action are determined univocally by the intention of the agent" (Kotarbiński, 1966, p.449). The definition is concerned with the stages that are seen as important for the description of the mode of action, and in this description the intention has the central role.

Now, ideas about the meaning of methodology are in some way different derivations from the concept of method. Checkland (1981) working from a MS/ST perspective,

suggests following what Kotarbiński calls a praxiological (action oriented) approach to methodology. A methodology is then a "set of principles of method" (Checkland, 1981, p.161). Consequently, a methodology:

> Would cover such recommendations as the proper order of actions, the principle that earlier actions should be the best possible preparations for later actions, distinctions as between synthesis (when a whole is being built of elements) and analysis (when elements are being extracted from the whole). (Kotarbiński, 1966, p.439)

Additionally, the methodology's principles "are used to underlie, justify and inform the things which are actually done in response to a particular human problem situation" (Checkland, 2000, p.36).

It is important to clarify that for Kotarbiński, methodology is a discipline in its own right. Consequently, there is only one methodology. However, Checkland's interpretation carries the possibility of many possible sets of principles. Therefore, there can be many possible methodologies.

Another important clarification is the difference between method and methodology. The concept of method conveys the idea of following a course of action in a systematic way. Methodologies are not prefiguring courses of action, they propose frameworks of ideas that can be used to decide how to prepare for action and consequently, can be used to decide what and how methods can be applied.

2.3.2 An Iceberg View of Methodology

The image of an iceberg has been a popular way to present different components of a culture and has been alluded to in relation to the 'culture' of using methodologies (Brocklesby, 1995). This section looks to develop this view by following arguments about how different methodology components are related.

The following argument takes as a base Checkland's notion of methodology. When a methodology defined on these terms is used to reflect how to act in a situation, over time some "modes of action", using here Kotarbiński's language, will arise. If these modes of action become systematized and applied to similar cases, a method arises. Now if the method when applied can guarantee an outcome it becomes a technique

(Checkland, 2000). Considering how these chains develop, it can be argued that methods and techniques can be considered part of the methodology.

The next piece in the iceberg view is provided by Checkland (1981). He states that methodologies have an intermediate status between philosophy and techniques. Techniques are useful to answer questions of how. Philosophy is an entirely different level, letting us inquiry about what. It leads to identification of what situations can be tackled. Consequently, from this point of view, methodologies share a little of both kinds of answers. It deals with how to do something showing modes of action, but at the same time it reflects about what to do with those modes of action.

The idea of different layers in a methodology is also implied by other authors. For Mingers and Brocklesby (1997) the different layers are philosophy, methodology and techniques. They add to the "methodological vocabulary" the term "methodological stages" that in some way alludes to the "proper order of actions" in Kotarbiński. They also use the term "tool" to mean an artefact (usually computer software) that can be used to assist with the task of performing the techniques.

Jackson (2003b) in describing the components of different methodologies or approaches uses perhaps the most complete list of terms. He starts from the philosophy and theory, and then the methodology is used to translate these into practical applications through the use of methods, models, tools and techniques. Here, models are representations constructed under the guidance of methods or methodologies.

However, it is not always possible to find all the elements in every methodology. Jackson (2003b), for example, states that for some methodologies it is difficult to establish the philosophical and theoretical assumptions, as they are not always explicit. Checkland (2000) argues that due to the interpretative nature of his methodology (Soft Systems Methodology) it is unlikely that its methods will achieve the status of techniques.

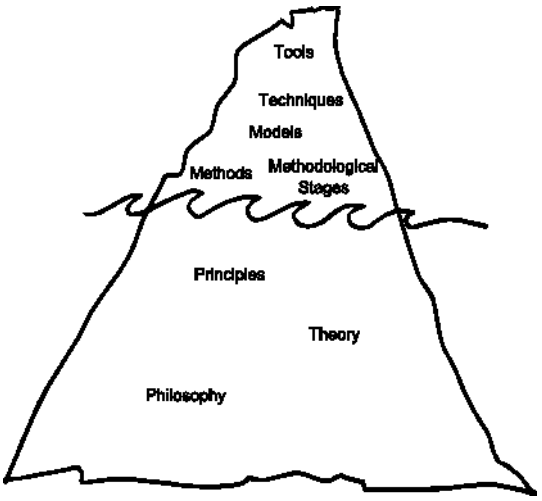

Figure 2.1. Iceberg view of Methodology.

Although definitions of methodologies focus on the idea of principles, it cannot be denied that elaborating on these principles starts to create ramifications. These ramifications, as it has been shown, go from philosophy to tools. Consequently, note that in Figure 2.1 the term methodology is applied to the whole iceberg. The usual place of methodology between philosophy-theory and methods is occupied by the terms principles and methodological stages.

One effect of all the ramifications is that the different definitions around methodology blend or confuse the concept with "neighbouring" ones. This could explain the many meanings attached to the concept of methodologies as shown by Lehaney and Vinten (1994). Consequently, it is useful to understand the differences between the concepts but with the awareness that they are intermingled.

Considering that concepts blend, mastering a methodology could be a daunting task, as Figure 2.1 may suggest. Usually people develop skills on the most visible parts of the iceberg (techniques, models, tools). Methods are more difficult; they entail intentionality and sometimes the relationship to the principles that gave rise to them is under the 'waves'. Methodological stages share the level of methods, and without a reflective framework, they are also a mode of action. Finally, the principles, theories and philosophy on which all the rest is based, encompass most of the volume of the iceberg which remains hidden.

Methodologies are complex because they try to manage complexity, but they suffer from "syndrome of sophisticated software, where only 10% of it ever get used" (Eden & Ackermann, 2006, p.767). By the way, that number corresponds almost exactly to the visible volume of real icebergs.

2.4 Standard Use of Methodologies

Reviewing the idea of 'Standard' or 'pure' use of methodologies is important for this research because it is another concept where the intention pops up. It seems that standards relied on the definition of formal or constitutive rules[1] (Checkland & Sholes, 1990; Jackson, 2000). The drive to standardize and create rules can become so exaggerated in some cases that rules aim "to think for the practitioner…", something that in practice "…will never be achievable" (Kay & Halpin, 1999, p.277).

The definition of the concept of standard uses in itself leads to a kind of paradox. Midgley (1997, p.317) uses the term pure to mean "in the form its creator intended". Standard use is defined as "the way that they were originally intended" (Mingers, 2006, p.236). So although with standards the push is for trying to get rid of actors' interference, the definition of standards shows that methodologies still depend on actors and their intentions. It is like Kay and Halpin's (1999) argument that the existence of methodology requires the presence of practitioner's use.

This section will show first how in MS/ST these standard uses are brought forth. Next, I will start to argue that these kinds of uses are unlikely. To this aim, I will introduce the concept of multi methodology, a concept that will help me to show how you get contradictions when the concept of standard uses is pushed forward.

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[1] When grouped and interrelated, constitutive rules allow the recognition of an activity as one belonging to a specific kind of activity. For example, football can be recognised as a kind of game because rules such as the number of players, the size of the playground, the legal and illegal ways to use the ball, etc. If some of the rules are not followed, it can be argued that the activity is not really a football match. Appendix 5 contains a list of constitutive rules for SSM.

2.4.1 How Standard-Uses Come to Be

In the first instance, the obvious answer for the origin of a methodology's 'standard use' is to refer to its original creator. Accordingly, it is expected that through apprenticeship with the creators people can learn use the methodologies in the most 'appropriate' way (Eden & Ackermann, 2006). The next step is that methodologies are appropriated by a community. As any community MS/ST will develop patterns of behaviour, namely cultures that make the practices of this community recognizable to other members (Brocklesby, 1995).

There is also the issue about professionalization of the discipline (Keys, 1998b). If the discipline is going to be recognised and respected, steps to formalize these practices need to be taken. These steps take the form of establishing journals, associations, and formal bodies of education. All these steps help in the process of declaring a segment of market and a set of recognised problems as competence of the discipline. In this way, the discipline looks to legitimise to the wider community.

Then there is the issue of applying for funding. Here projects are compared against standards and, consequently, approval and/or funding is decided (Goles & Hirschheim, 2000). In general it is very difficult to move away from these standards because going against the conventions implies huge costs for the researchers (Law, 2004).

Additionally there is the problem of clients. They need to understand what is being offered by the discipline and what to expect from the practitioners in intervention (Stainton, 1987). Perhaps this lead to the tendency identified by Ulrich (2001) (although he strongly opposes this) of justifying the work in relation to the "good" use of methodologies (Ulrich, 2001). "Good" use in this context will be application that is defensible by MS/ST community standards.

Grand narratives are another factor in standard use. Grand narratives aim to explain a big range of different theories or fields of knowledge in terms of a particular rationale. They produce standards because possible differences or variances inside the approach (or among approaches) are subdued and subsumed by the dominant rationale.

In Management, positivism has been the predominant narrative and for a while it seemed the only one (Nodoushani, 1999). In the field of MS/ST, White and Taket (1996)[2] identify other grand narratives that they broadly name Kantian Transcendentalism (two versions), Narratives of Human Emancipation (two versions) and one appeal to Universal Rationality. One way in which these narratives produce standards in MS/ST is through how they manage pluralism, the topic of the following section.

2.4.2 Pluralism

The topic of pluralism in MS/ST refers to how to manage the diversity of methodologies available to the practitioner. As it was described in Section 2.2, it is possible to recognise at least three broad traditions in MS/ST and in each one of the traditions, many methodologies that are seen to belong to them. Although this can be seen as a weakness of the approach, the argument is that such diversity presents an opportunity to practitioners as introduced in Section 2.2.3 regarding Critical Systems Thinking. Accordingly, practitioners can now choose what methodology is more appropriate for the problem at hand, using more than one methodology in the process; it is even possible to make combinations of different parts of them. This way to proceed has been gaining importance in MS/ST (Munro & Mingers, 2002; Paucar-Caceres, 2003).

In Pluralism the main problem is how to find a common ground to decide the best way to combine different approaches. There is a good number of methodological proposals[3] about how to accomplish this. Some of them are: Total Systems Intervention (Flood & Jackson, 1991; Jackson, 1991), Pragmatic Pluralism (White & Taket, 1997a, 1997b), Systemic Intervention (Midgley, 2000), Local Systemic

[2] Actually the text itself does not identify any author or concrete school of thought. The text is build around a series of dialogues between mythological muses that represent characteristics present in different positions in the literature.

3 It is also important to state that additional to these reflective ways to combine approaches, there are also those who combine them without theoretical assistance (Mingers & Brocklesby, 1997).

Intervention (Flood, 2001), Critical Appreciation (Gregory, 2000), Diversity Management (Flood & Romm, 1996), Critical Pluralism (Mingers, 1997b; Mingers & Brocklesby, 1997).

Here I want to raise the issue of these approaches affecting the standard intention. For the sake of the argument, I will focus on just two of them: Total Systems Intervention (TSI hereafter) and Critical Pluralism (CP hereafter). I choose these because they are widely explained and influential in the field, and also because they share some similarities. Both draw from Habermas (although from different parts of his work), and both use a kind of matrix in order to qualify the characteristics of the methodologies. Finally, both aim to use methodologies in the standard way.

I will focus my description on just two aspects: 1) how these approaches decide the particular utility of a methodology, and 2) their description of the methodological stages.

2.4.2.1 TSI

TSI is the predecessor (Flood & Jackson, 1991; Jackson, 1991) of what Jackson (2006) now calls 'Creative Holism'. I refer to the old version (Jackson, 1991) because this is better known and because, despite many attacks and arguments against its assumptions, in Jackson (2003b) some of the examples of creative holism still rely on TSI.

Habermas's 'Theory of Human Interests' is the common ground used by Jackson to mediated differences among methodologies. The idea is that no matter what we humanly do we always orientate our action to one or a combination of three interests: 'the technical', 'the practical' and 'the emancipatory'. According to the kind of interest is then possible to classify three kinds of context respectively: unitary, pluralist and coercive.

Jackson's argument is as follows: If there are no tangible differences in how people perceive the problem (unitary), a methodology based on prediction and control can be used. If the problem is not clear and there are conflicting views, but it is felt that is

possible to reach an agreement (pluralist context), then a methodology based on a practical interest can be used to achieve intersubjective understanding. However, if the participants have their own agendas and the context is dominated by power struggles (coercive), a methodology based on emancipatory interest is the call.

The different contexts based on the Habermasian interests constitute one dimension of analysis. Another dimension used for analysis is the complexity of the problem. In this way, a table can be constructed showing both dimensions (Table 2.1). The idea of the table is to analyse a methodology and decide (based on the methodology's assumptions) where the methodology can be allocated (Jackson, 1990; Jackson & Keys, 1984).

	Unitary	Pluralist	Coercive
Simple			
Complex			

Table 2.1. Dimensions of analysis for classifying a methodology in TSI.

Now regarding TSI's methodological stages, three are proposed: creativity, choice and implementation. Creativity is aimed to explore the problem under diverse metaphors. Based on the insights of the first phase and the table, a methodology is chosen. Finally, implementation uses the selected methodology.

2.4.2.2 Critical Pluralism

It is important to clarify that one of the differences between CP and TSI is that while TSI aims to choose the best methodology for a particular situation, CP aims to combine different parts of different methodologies.

Nevertheless, as with TSI, CP also has to deal with the problem of finding a common ground to mediate differences in methodologies. Additionally, CP is also based on Habermas. Here the strategy is to consider that in some manner or other all our actions (read here methodologies) are related to three worlds: the material world, the social world and the personal world (Mingers, 2006).

In theory, the material world exists independently from us and refers to physical circumstances. The social world is created by our interaction and refers to the arena of social practices and power relations. The personal world refers to our individual thought, beliefs and emotions. The idea is that some elements in each methodology are better prepared than others to deal with each one of these worlds.

For example, mathematical models are regarded as better equipped to deal with physical circumstances and hence with the material world. Tools that allow understanding and/or ways to alter existing social structures are seen as more relevant to deal with the social world. Finally, tools that allow actors to reflect and change their view are seen as closer to the personal world.

Here also there is a second axis. In this case it refers to the intervention as a process. Fours generic phases comprise an intervention process.

> *Appreciation* of the problem situation as experienced by the agents involved.
> *Analysis* of the underlying structure/constraints generating the situation as experienced.
> *Assessment* of the ways in which the situation could be other than it is; of the extent to which the constraints could be altered.
> *Action* to bring about the desired changes.
> (Mingers & Brocklesby, 1997, p.494)

Combining the different worlds and generic phases of an intervention, Table 2.2 is obtained.

	Appreciation of:	**Analysis of:**	**Assessment of:**	**Action to:**
Social World				
Personal World				
Material World				

Table 2.2. Worlds and Generic Phases of Interventions in CP.

The methodological stages rely again on the appreciation, analysis, assessment and action phases (Mingers & Brocklesby, 1997).

2.4.3 Whose Standard-Use? Flirting with Intention

A case can be made then that TSI and CP authors generally accept the idea of having standard uses of methodologies and the idea that intention has something to do in it. On CP the idea is quite clear. As it was shown, Mingers defined what is a standard use in terms of intention, and he suggests that his work looks to define standard uses (Mingers, 2003, 2006).

Now Jackson on the issue of standard uses said: "It makes no sense to break the link between paradigm and methodology. A methodology that does not serve the paradigm that it is meant to serve is a bad methodology or is simply used wrongly" (Jackson, 2003a, p.1300). He does not mention the word standard, but it seems that it is important to stick to some rigid idea. On intention, he have this quote about making a different use of a model: "it will have to prove its worth, particularly when it finds itself serving purposes very far from those originally intended" (Jackson, 2003b, p.311). So here there is clearly some relation between a standard use and intention.

The following step in this argument is to consider if methodologies under the influences of a framework will behave differently. This question already has been considered by Gregory (1996). She uses the metaphor of a force field to argue that methodologies are 'aligned' when they are used inside an organising framework as TSI. In the same way that disorganised iron particles are aligned by a magnet, methodologies with different purposes are aligned to the purposes of the methodological magnets TSI and CP.

How can be known if different frameworks 'magnetise' methodologies in different ways? Let us consider an example with Soft Systems Methodology. For this example, it is not really necessary to know the details about this methodology. It is only necessary to know how has been classified by TSI and CP, this is shown in Tables 2.3 and 2.4.

	Unitary	Pluralist	Coercive
Simple			
Complex		**Soft Systems Methodology**	

Table 2.3. SSM accordingly to TSI (Jackson, 1991).

	Appreciation of:	Analysis of:	Assessment of:	Action to:
Social World	Social practices, power relations			
Personal World	Individual belief, meanings, emotions	Differing perceptions and Weltanschauung	Alternative conceptualisations and constructions	Generate accommodation and consensus
Material World	Physical circumstances			

Table 2.4. SSM accordingly to CP (Mingers & Brocklesby, 1997).

TSI classifies what is the most appropriate context for the methodology as a whole. CP looks how to decompose the methodology in different elements in order to connect these elements with elements from other methodologies. For the sake of the argument let us say that the methodology will be use as a whole in both frameworks.

So in TSI, SSM will be applied to a pluralist-complex context in an implementation stage. In CP the situation is more difficult to express but, in short, SSM will be applied with different intensities (different shadow on Table 2.4) to different aspects of three different worlds through four stages of the process.

With these two purposes in mind it can be said that they follow the same standard? That is, do they use the methodology with the same intention? And what happens when I use the methodology without the guidance of these frameworks, just when I follow the intention of the creator of the methodology? Is this a third different standard use? Intuitively we can feel that in some way all these uses are different. Clarifying what is different there will require a good understanding of what intention entails. Just let me state now that if a standard use is to be followed, choosing whose

standard will be tricky, especially under the absence of ways to detail what is the intention.

2.5 Non-Standard Uses

If standard uses of methodologies are the ones that follow the original intention, non-standard uses are those ones in which the intention moves away from the original one. This shows a crack in the idea of standard uses and shows another intrusion on intervention by intention. For that reason non-standard uses are of interest for this research.

Now, the phenomenon of methodologies being use in different ways to the pre-designed ones is not new, and has been recognised in the management field. For example, Mingers (2003) describes how something as "hard" as mathematical programming or computer simulations has been used to portray subjective descriptions or model different perceptions and beliefs. He also suggests that it is an area that requires more research. In fact, Mingers treat non-standard uses as something unusual. This is in contrast with the argument that I hinted at in the last section, and that I will pursue more deeply in this section: that non-standard uses are really very common.

In this light, the next section will start to show the different sources of non-standard uses. Although this research focuses on practitioner intentions as a source of non-standard uses, it is not the only one. Next, some methodological proposals that aim to produce non-standard uses are presented.

2.5.1 How Non-Standard Uses Come to Be

To this point, the argument is that a 'non-standard' use occurs when a methodology or part of one is used in some manner that departs from the accepted or conventional usage. How might this come about?

Several works provide a starting point to explore this question, for example, Kay and Halpin (1999), Checkland (2000), and Taket (1994). These and other authors contend

that a methodology-use cannot be understood solely in terms of the methodology itself, i.e., it is vitally important to take account of both the people involved in using it and the context of application.

Here I will follow Mingers (1997b). He suggests that in order to understand an intervention context it is necessary to reflect on three interacting components:

- Problem content systems: The situations to be intervene.
- Intellectual resources system: Methodologies and theories that inform the intervention.
- Intervention system: The agents carrying out the intervention.

The next subsections examine how non-standard uses come to be in relation to the subsystems in which they arise.

2.5.1.1 Problem content systems

The iceberg view shown in Figure 2.1 gives an idea of how complex a methodology can be. However, based on Beer (1994) it can be argued that compared against the complexity of the problem situations that they aim to manage, they are simple. Due to this complexity, methodologies are not prepared to respond to all the possible scenarios that can exist. So practitioners must react and adapt them in order to respond to the challenges (Midgley, 1989; Ulrich, 2001). In addition, as Bowen (1998, p.174) puts it, "no methodology can ever be perfectly followed, since time and pressure forces one to cut corners". Moreover, even if you are determined to follow a prescribed route, macro-pressures can hinder your purpose (Gregory, 2000). As Keys (1998a) points out, interventions cannot be described as scientific in nature but as a socio-political process in which aspects as actor networks and power have to be taken into account (Brocklesby, 2009).

2.5.1.2 Intellectual Resources System

The idea of standard use of methodologies has been the dominant of MS/ST community. However, there are some recent intellectual approaches that are affecting

how people use methodologies. Basically, these influences push for more flexibility and creativity when dealing with interventions, causing new non-standard uses.

At the level of methodology perhaps the biggest influence is the concept of pluralism and multi methodologies. The tendency of mixing methodologies to intervene has burgeoned and become something usual both for consultants and for more academic oriented practitioners, in part as a response to the richness and complexity of the world (Mingers & Brocklesby, 1997; Munro & Mingers, 2002; Paucar-Caceres, 2003; Rosenhead, 1997). As a consequence of this tendency it is increasingly difficult to connect an intervention process to a single set of principles. This marks "a breakpoint – the definitive escape of these methodologies from their inventors" (Rosenhead, 1997, p.xiv).

The development of each methodology must also be considered. For example, Systems Dynamics started as being functionalist and oriented to computer simulation (Forrester, 1961). However, over time it has developed soft traits suitable for managing meaning in interventions (Rodriguez-Ulloa & Paucar-Caceres, 2005; Schwaninger, 2006; Schwaninger, Janovjak, & Ambroz, 2006). In the case of Soft Systems Methodology, although the interpretative character is not in discussion, different efforts to develop understanding of its implications draw from other traditions such as multi aspectual philosophy (Basden & Wood-Harper, 2006), autopoiesis (Brocklesby, 2007), organizational behaviour (M. C. Williams, 1999), pragmatism (Attwater, 1999; Ledington & Ledington, 1999). In SSM another problem is that sometimes it is even difficult to understand if the methodology has been really applied due to all the different uses (Spear, 2001).

So here it can be argued that these methodological developments have an impact on methodologies in the same way that pluralism in Section 2.4.2 also has it. Having different ideas of what SSM or SD represents will have an impact on how people will use them. If they do not have an impact, why care about new developments?

The other big influences in the intellectual resources systems are the new paradigms being employed to inform interventions. Paradigms such as Pragmatism (Rorty, 1999) and postmodernism reject the idea of grand narrative, the idea that it is possible

to have a stable grounding for truth in Management Science. Instead, they talk about local solutions, finding what is useful in a specific situation and using different sources of inspiration (Kuhn & Woog, 2005; Ormerod, 2006; White & Taket, 1996). In these approaches "theorizing is undertaken not for the purpose of producing a theory (or even theories), but for the purpose of stimulating action" (Taket & White, 1998, p.155). The purpose is not the production of grand theories. The purpose is the activity of finding local explanations or justifications to guide intervention in the particular situation.

2.5.1.3 Intervention system

Finally, this section deals with the practitioner, the holder of intentions and centre of this research. Of course there are trivial explanations of how practitioners affect methodologies such as the lack of knowledge of the actors (Größler, 2004). More complex arguments, however, derive from how our constructions affect what we are doing in an intervention (Romm, 2002). For instance, Brocklesby (1995, p.1289), states that how a methodology is used "will depend upon the meanings the researcher attributes to it, and what they think about it …no one can mandate what combination of meanings will operate for a particular user".

Checkland and Sholes (1990) make the distinction of using SSM in Mode 1 and Mode 2. In Mode 1, the practitioner follows the methodology as a recipe; this happens when people are just learning the methodology. In Mode 2, the practitioner is experienced, with an interiorised version of the methodology adapting his actions to what is happening in the context. Bowen argued that at this stage, when the practitioner is familiarised and confident about the methodology, "they have molded what they started with in their own image" (Bowen, 1998, p.175).

The lesson in these stances is that practitioners affect methodologies, and these effects have been recognised. However, how this works in practice is still a question looking for answers.

2.5.2 Making Non-Standard Uses

The last section shows how from the perspective of different subsystems non-standard uses came to be. Here, from a methodological point of view, the focus is on how different authors have been operationalising the idea of using methodologies in 'non-standard' ways. This shows in some way that actors can play a role on the intervention. If actors can play this role perhaps there is a role for their intentions.

2.5.2.1 Use of Methodologies as Hermeneutic Process

Watson, Wood-Harper, and Wood (1995) work on the idea that the meaning of a methodology depends on both the methodology and the practitioner's experience. According to them, this interaction sets the context for interpretation. However:

> contexts are boundless in at least two senses: (1) Any known context is open to further description since there is potentially no limit as to what may be relevant. (2) Contexts are unmasterable since attempts to codify them into types and taxonomies create new contexts that exceed our prior explanations. (Watson et al., 1995, p.442)

In the first case it does not matter how complete is the description of an issue, it is always possible find something relevant to add to that descriptions. For the second case Watson et al. (1995) use an example based on Wittgenstein (1958), the phrase "Can I say 'bububu' and mean 'if it doesn't rain I shall go for a walk?". If we hear 'bububu' alone most likely we will not understand its purpose. However, once we are aware of Wittgenstein's complete phrase it will not be a problem to understand what the person wants to do, and a new context is created.

Based on these ideas, Watson et al. (1995) claim that is impossible to fix the meanings attached to a methodology, so they always need to be interpreted through a hermeneutic process. With the aim of helping the interpretation, they suggest to assume the methodology as a text or metaphor. The text and metaphors can be then re-contextualised in every opportunity that is needed using processes of self reflection.

This approach clearly supports the proposition that practitioners have a major influence on how methodologies are deployed. Because interpretations are boundless

practitioners will reach uses beyond the intentions of the creators of the methodologies. This approach provides an explanation of why different uses appear. However, it does not show how to achieve them in a purposeful way. This situation is addressed in the next two approaches.

2.5.2.2 Oblique Use

Flood and Romm (1995) present their approach as an enhancement of the TSI[4] process described earlier. Under TSI different methodologies are classified accordingly to their usefulness to certain context. For example, it was shown under TSI, that SSM is a good choice for a context that is considered to be fundamentally pluralist in nature.

However, Flood and Romm (1995) argued that it is possible to use principles of other methodologies to steer another methodology. Under this logic, an emancipatory principle can be used to direct SSM despite this emancipatory principle not being supported under SSM. Flood and Romm (1995) call this an oblique use. Graphically, it can be seen in Figure 2.2

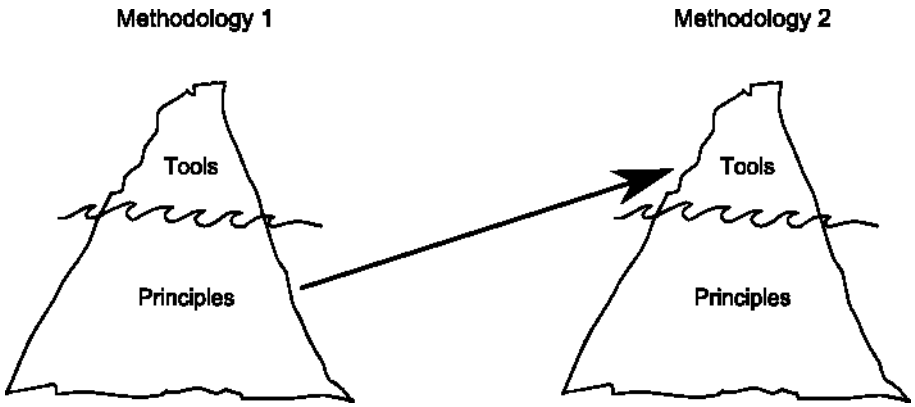


Figure 2.2. Oblique Use.

[4] Although this argument is really base on a version of TSI usually referred as TSI 2, I will use the notions of TSI already explained that in essence do not change the argument.

Although this process enhances the possibilities of the practitioner, still requires from the practitioner a 'methodologically' guided process. It uses a different set of principles for a methodology, but such different principles have as their source another methodology. In a way the practitioner intention is bound to choose between the known methodologies. It does not take advantage of the boundless contexts of the previous approach.

This work has been very influential in the sense that it is customary in discussions about non-standard uses, as can be seen in Mingers (2003), Jackson (2003a) and Midgley (1997).

2.5.2.3 Creative Design

Flood and Romm (1995) based their work on oblique use in re-interpretations of some intervention processes. Midgley (1997) contests their interpretations and suggests that instead of oblique use a process of synthesis has more explanatory power and also presents more opportunities for practice.

The oblique interpretation focuses on how the principles of one methodology 'manage' methods in another methodology. The synthesis argument is that principles of different methodologies, together with their methods are mixed and synthesised in new methods. In this way, the intervention process can be more responsive. It is even possible from this approach to use principles of other methodologies to construct our own. This is more responsive because new methods are tailored accordingly to the need of the context. Hence the name of Midgley's (1997) approach: creative design.

Here the critique will be that although a huge range of possibilities is implied, the explanation about them is so wide that is difficult to see how they can be used in practice. From the point of view of this research, although intentions are mentioned, they are also taken as obvious and not really explained.

2.6 Additional Ways to Learn about an Intervention Process

The whole discussion of standard and non-standard suggests that non-standards uses seem common. One consequence of this is that it is necessary to take intentions into account in the intervention. However, a concern about non-standard uses is the problem of learning about intervention.

The arguments go that if methodologies and methods are used in the way in which they are not meant, if they are detached from their respective paradigms, the possibility of understanding the practice is hindered (Jackson, 2000). Finding ways to understand practice is important because "it enables practitioners to reflect upon the nature of their work…It offers a framework within which general issues of concern can be addressed" (Keys, 2002b, p.211). Jackson's concern seems to rest on the idea that the only way to reflect and address intervention issues is through methodologies.

However, some authors seem to suggest that intervention accounts based on methodologies are overrated. For example, Brocklesby (1995) states that a lot of systems research pays lip service to methodologies. Westcombe, Franco, and Shaw (2006) consider this approach as just weaving anecdotes around the specific use of a methodology. Keys (2002b, p.212) points out that "a main disadvantage [of methodologies] is that they simplify the work, often to an unrealistic degree, and do not formally acknowledge its social aspects". Additionally, as it was presented Ulrich (2003) criticises the idea of defending the quality of the research based on the methods followed.

In this context, it is necessary to ask: are there alternatives to methodology based learning? Keys (1997) identifies three approaches. The theory driven approach (the one relying on standards), is expressed mainly through methodologies where knowledge about how to intervene is encoded. The practice driven approach, deriving from social science, focuses on concrete cases of intervention. Finally, a new emerging third approach looks to work across the other two circuits of analysis.

The first approach has been already shown. The second, the practice driven, "examines in detail particular pieces of MS/OR work and seeks to develop an

understanding of how experienced practitioners carry out their work" (Keys, 2002b, p.212). This approach pays attention to the social and political as well to the creative aspects of intervening, seemingly suitable ground for developing intentions-based accounts of intervention. In the third approach what practitioners actually find in practice is integrated with the technical aspects of the methodology.

Working on intentions and examining their impact on actions can give us elements to link both sides. On the practice led-side, focusing on intentions can lead (as Chapter Four shows) to ways to account for: how we make sense, explain and rationalize our actions and those of others; how the interactions between actors are coordinated; and how actions are caused, sustained and guided. All these can enrich the practice-led side.

Intention can also help to link the theory-led approach because methodologies imply action and intentions are inextricable linked with actions. Also, the descriptions of the action in a method are determined by the intention of the actor (Kotarbiński, 1966). In this way approaches for linking theory and practice can be explored giving us new ways to tell stories about interventions.

2.7 The Ethical Importance of the Actor in MS/ST Methodologies

If the argument presented up to this point is accepted, then it follows that the actual actor involved is a key component in the practical use of MS/ST methodologies and in the intervention process. Yet quite often it seems that this is not the case. It could seem that actors are neglected in MS/ST. One argument is that this impression is due to the dominant role of functionalism in the area (Goles & Hirschheim, 2000). Under functionalism problems exist independently from actors and there is a correct way to approach their solution that is independent again from the actor carrying out the intervention. So in this scenario methodology has been the object and centre of MS/ST research and practice (Gallo, 2004; Keys, 1997).

However, there are streams of thought that support the claim of the centrality of the actor in systems thinking. Developments such as appreciative systems (Vickers, 1983), autopoiesis (Maturana, 1988) and links between systems and phenomenology (Georgiou, 2007), put actors to the centre of experience and action in the world. All of these views are important and help to make the case about the centrality of the actor in the intervention. However, perhaps the most important argument is ethical.

Ethics is a branch of philosophy, such as ontology or epistemology, which deals with reflections about issues such as what is right or wrong, what is good or evil. Ethics is trying to make us aware that our visions of the world, and our actions have consequences. Ethics is "values in action" (Midgley, 2000). Hence, the actor's stance in a situation is critical.

> Ethics certainly cannot be left to others, nor can it be fully dealt with through building subjectivity into models in circumstances where that approach arises as an option. Instead the argument is that ethics is situated and contextual in character, it is inextricably linked to daily practice, and, as a result, it is something that must be engaged within the local context as the assignment or intervention unfolds over time. (Brocklesby, 2009, p.1075)

The ethical argument about the centrality of the actor and its intentions for MS/ST practice is simple. If our intentions do not affect the modes of actions and our reflections about how to guide those modes of action, then we are not responsible and accountable for the use of tools, methods and methodologies. In this case, if we do not arrive at the desired outcome, we can proceed to blame our tools.

This argument mirrors Maturana's two ways of formulating and considering explanations, what he refers to as "the path of objectivity - without - parenthesis, … and the path of objectivity - in - parenthesis" (Maturana, 1988, p.28). On the first one "the observer implicitly or explicitly assumes that existence takes place independently of what he or she does" (Maturana, 1988, p.28). Consequently "It is in this explanatory path that a claim of knowledge is a demand for obedience" (Maturana, 1988, p.29). In this path, there is no space for an actor's intrusions on the ideas informing their actions. The only option is to obey what methods and methodologies are demanding.

In the second path, the path of objectivity - in - parenthesis, the observer accepts "that his or her cognitive abilities as an observer are biological phenomena because they are altered when his or her biology is altered" (Maturana, 1988, p.29). For this reason, the observer cannot claim that situation or knowledge is independent of the way in which s/he observes. Here there is space for an actor shaping methods and methodologies.

Some authors are aware of the importance of the role played by the actors. For instance, Ulrich (2001, p.9) in a statement that can be extended to methodologies affirms that: "it is an error to believe that good practice can be justified by reference to the research methods employed. Methods need to be justified by reference to their implications for practice, not the other way round!". Rosenhead and Thunhurst (1982) points out that sometimes OR practice is presented as scientific, lifting in this way the burden to assume responsibility for managerial decisions. Beer (1994) following similar logic argues that, in general, managers are looking for advice that will give the answers to problem situations for them.

Nevertheless, "is impossible for practitioners to set aside their identities and become 'neutral' modellers or process facilitators" (Midgley, Ahuriri-Driscoll, Foote, Hepi, & et al, 2007, p.234). Besides, "More than many other scientific disciplines, [OR] have an impact on people's lives and hence society at large" (Gallo, 2004, p.470).

Accordingly, to Córdoba (2006), ethics had been explored in different ways in MS/ST. Related to the idea of improvement, there is the idea of emancipation used in Critical Systems (Flood & Jackson, 1991). If there are some imbalances of power in situations it will be a quest for the practitioner to set things right. These approaches are basically based on Kant and Habermas. They aim to the ideal of the enlightenment that is possible through reason to deal with imbalances of power and achieve better conditions for everyone.

However, as Córdoba (2006) points out, this approach does not improve how individuals deal with their ethical dilemmas. Yet, there is a long history of works in the area that stresses the importance of the ethical dilemmas faced by the actor or users of methodologies. For instance, Churchman (1968; 1979) is an early advocate of the importance of actors in intervention processes. For him, systems exist in the

mind of the observer (not in reality). Even "very real" institutions like the use of money in our society, depend on social constructions and reconstructions. For example, every actor collaborates through buying and selling in the re-enactment of the conditions that bring its reality into existence. There is nothing intrinsic in money that points to its value; the value is the one given by actors' agreement (Searle, 1995).

Churchman's focus on the actor triggered the soft systems tradition (Reynolds, 2004). "The systems approach begins when first you see the world through the eyes of another" (Churchman, 1968, p.231). If systems are a way to see and different 'eyes' bring different possibilities, the selection of views will be the responsibility of the practitioner. "The planner is not limited by any conditions in setting the boundaries of the social system; he is free to set them according to his judgment" (Churchman, 1979, p.111). Therefore, it is fundamental to the practitioner to reflect how others see the world.

Being a planner carries an ethical burden, "The planner's main client is humanity, and when a conflict occurs between the contractor's intentions and what the planner judges to be the betterment of humanity, the planner should strive to serve the latter rather than the former" (Churchman, 1979, p.111). For that reason, for Churchman the practitioner needs to be a hero, and it is necessary to looks for methodologies "in which human bias is a central aspect" (Ulrich, 2004, p.1129). Churchman's work on boundaries is an important aspect of this research as Chapter Six shows.

Taket (1994; 2002) also emphasizes the responsibility of the practitioner in how understanding is constructed in the intervention setting. In that line, she states that a code of ethics cannot be the last word on how practitioners have to conduct an intervention. She shows how her judgement of the situation (distancing herself from the ethics codes) has been critical in deciding how to present herself, her expertise and the methods and methodologies being use.

Furthermore, in direct relation to the use of methodologies, Brocklesby and Cummings suggest Foucault's ideas as an alternative. From this perspective, as was already mentioned, practitioners can organise their own toolkits with different methods and methodologies, and they can decide how they can be best used. If one

"wishes to be true to Foucault, … one only need to be true to oneself." (Brocklesby & Cummings, 1996, p.752). This is again the idea of self-emancipation placing the weight of methodology use to the actor.

The aforementioned arguments go in line with the idea that practitioners have a say in how methodologies will be applied. This opens possibilities for research regarding how methodologies can be affected by practitioners. Specifically, I want to explore how the practitioners are having this effect through their intentions.

At this point, a caveat is necessary. Being concerned about ethics is not denying that "for some practitioners, having to grapple with complex social relationships, multiple interests, and organisational politics, while at the same time being required to conduct exemplary analysis, may simply be too hard" (Brocklesby, 2009, p.1075). Under this light, although caring for ethics is good for humanity, it can be a heavy burden for the practitioner.

2.8 Research Gap and Research Questions

As has been shown in this chapter, intention is at the core of concepts such as method and standard use of methodologies. Non-standard uses and ethics offer us additional ways to think that actors and their intentions are important for an intervention. These arguments are indirect about the importance that intention can have for MS/ST.

Direct arguments that can be cited for the importance of intention relied on the importance of intention being recognised. Checkland and Sholes (1990, p.2) working on the soft systems paradigm state that "Given the creation of an interpreted, not merely an experienced world, we can form intentions, we can decide to do one thing rather than another". Ulrich (1983, p.238) regarding social phenomena asserts: "if we want to understand them in such a way that we can eventually change them, we must understand them as 'facts' produced by the working of human intentionality". Although the reference to the importance of intentions is clear, these authors do not develop intention. Based on the importance of intention they develop ideas in relation to meaning, taking intention for granted.

One concept on the surface seems similar to intention is that one of purpose. Although it is an important concept for Systems Thinking, it is difficult to find a definition of purpose in the literature. What we can find is statements that make use of purpose without defining it. "Purpose is imputed to a system by its observer" (Beer, 1994, p.13). When classifying different kind of systems "the critical classifying variable is purpose, and purpose can only exist where there is choice, and choice is of either means or ends, that is, desired outcomes…An entity is purposeful if it can select both means and ends in two or more environments." (Ackoff, 1999, p.21). "Purposefulness [refers] to the critical awareness of self-reflective humans with regard to end or purposes and their normative implications for the affected" (Ulrich, 1983, p.328)

From the above quotes there are some differences with intention that are worth mention. Intention refers to something that belongs to an actor, not something that it is ascribed from the exterior as it can be in the case of purpose. Something that we expect from intentions is their capacity to guide, produce and sustain actions (Mele, 1992). In Ackoff and Ulrich quotes no reference is done to action. However Ulrich recognizes that is important to move the debate about purpose. In fact Ulrich criticize the concept of purpose in Systems Thinking.

"I suggest that we understand purposefulness as a concept of practical philosophy rather that of behavioral science, i.e., as referring to the intentionality and self-reflectiveness of an agent (agent's point of view) rather than to systems behavior as observed from a spectator's point of view" (Ulrich, 1983, p.334). However, this quote is missing again the action and the concept of intention is again underdeveloped.

Due to its recognized importance and that the concept of intention is behind important concepts in MS/ST practice, it is important to develop the concept. Additionally, as it was mentioned on Section 1.4, there are potential contributions for MS/ST that can be derived from a work on intentions: How intentions affect the tools used (e.g. methods, methodologies) in an intervention? What possible avenues open for achieving flexibility and creativity? How intentions can help us to account for

intervention processes? What is the impact of realising the importance of intention for ethics?

Because the concept is underdeveloped on MS/ST, there is not much in what to underpin its research. Consequently, what is proposed here is a kind of initial or preliminary exploration of intention and what they can offer to MS/ST.

In particular, this research aims to address the following main question: What is the relevance of intentions in MS/ST interventions? This is to ask for the pertinence and applicability of the concept for MS/ST. I have two supporting questions to the main one. First, what are intentions? If we are talking about relevance, we need to know to what we are referring. Second, how can intentions be studied in interventions? If we are talking about pertinence and applicability, we need to find ways to describe when an intention has been applied. It is important to clarify here that I will focus on intentions on an individual basis, looking what concern to specific actors in the process.

Because the topic is underdeveloped I conducted this research covering a broad spectrum of ideas from philosophical, theoretical and empirical sources. The philosophical is conducted in the idea that philosophy's role is to clarify concepts, in this case intention. Theoretical exploration is needed to understand how knowledge about intention can explain and can be applied to interventions. The empirical is because the purpose of the exploration is to develop something useful for intervention in MS/ST. Contrasting the knowledge with field experience give reassurance that the whole discussion is not only abstract.

2.9 Approaching MS/ST Intervention through Wittgenstein's Philosophy

As it was already mentioned in Chapter One, Wittgenstein's philosophy is a strong influence in my work. It has shaped and guided the kind of questions, assumptions, and developments that I am using to understand what is involved in a social situation and, specially, intervention.

Here I will deal with some introductory aspects that will be taken for approaching the research as well as for developing and supporting the findings of it. I will explain first why I see potential in these ideas to understand intervention in relation to the present research and for MS/ST. Next, I will discuss the central concept of Language Games in Wittgenstein's later philosophy, and due to its importance for MS/ST, I will argue that is possible to approach methodologies in terms of Language Games.

2.9.1 Wittgenstein's Two Ways to Approach Language

Wittgenstein is one of the most important philosophers of the twentieth century. His philosophy centres on the problem of language, and on that problem he articulated two powerful and influential views. First he constructed language as "the mirror of the world" (Wittgenstein, 1922), arguing that the structure of sentences and ideas was showing the logical structure of the facts in the world. For instance, these ideas were use by the Vienna circle to support their project of achieving the unity of science (Nodoushani, 1999). This implied expressing the whole of knowledge in a single logical standard language.

However, if it is considered that a methodology must mirror something about the world, or that it must agree with a single logical standard language, then neither non-standard uses of methodologies nor the effect of intentions on them is desirable or feasible. These uses and effects will deviate from the "real" image of the world and the logic of a standard language. This view is unsuitable for research that implies the possibility of having multiple non-standards uses for tools. Under this rigid view, the task of the actor is simply to assess the 'facts' of the situation and then select the appropriate methodology. (see, for instance, Jackson and Keys (1984)).

According, to Garfinkel (1981), conceptual frameworks guide the kind of questions and explorations that we can make. Consequently, this research requires a conceptual framework capable of embracing multiple factors and situations in interventions. It requires abandoning the idea that there is an intrinsic or "true" nature in the tools that have to be expressed in particular ways. It requires a philosophical position where

factors such as the actor and its ethical stances and the context, mentioned through this chapter, can have a place in understanding such use.

Wittgenstein's (1958) later view on language meets this purpose. Here the 'reality' is not out there, so there is no need to mirror it. The metaphor is now the one of the tool. Language allows us to do things in the world. Knowledge is created by social interactions or, in Wittgenstein's terms, 'language games'. Knowledge is dependent on of the actors involved. Here it is possible to find a place for intentions.

This view is presented in 'Philosophical Investigations' a book that some consider the most important book in 20th century philosophy (Stern, 2004). The views in this book are associated with what is now called social constructionism, an influential view not only in organization studies but also in broader humanities and social sciences (K. J. Gergen & Leach, 2001; M. M. Gergen & Gergen, 2003; Schwandt, 2000).

The influence of Wittgenstein's view on MS/ST is indirect and not so visible. Authors such as White and Taket (1997b) and Jackson (2000) allude to him in support of their ideas but without making his ideas central to their claims. One possible exception is Hassard's (1990) proposal of mediating incommensurable paradigms using a meta-language game. However, it seems that this proposal has not been developed or further commented on the literature. Yet, there are ideas on second order cybernetics where the concept of socially constructed knowledge in language finds resonances (see, for example, Varela (1979), Maturana (1988), Von Foerster (1989), and Von Glasersfeld (1996)). Using Wittgenstein's ideas to inform MS/ST is one of the contributions that this thesis looks to make to the field.

2.9.2 Language Games

Through a series of thought experiments, Wittgenstein (1958, §43) not only shows that meanings are affected by use, but provides the crucial idea that "the meaning of a word is its use in the language". This implies that meaning does not stem from intrinsic characteristics in the word. Meaning arises from what it is possible to do with such a word. In consequence, words are being seen as tools that can be applied to affect interactions in the context. For example, following Winograd and Flores

(1986), a speech act of declaration, can pronounce a couple married, or declare somebody as CEO in a company.

This idea of meaning as use derives from perhaps the most famous concept in Wittgenstein philosophy: Languages Games. Accordingly, to Wittgenstein (1958, §7), language can be understood in terms of language games. These are defined as "the whole, consisting of language and the actions into which it is woven" also "the term 'language-game' is meant to bring into prominence the fact that the speaking of language is part of an activity, or of a form of life" (Wittgenstein, 1958, §23).

However, it is difficult to apply the concept of Language Games, mainly because Wittgenstein explicitly avoids elaborating the concept. In his own words:

> For someone might object against me: "You take the easy way out! You talk about all sorts of language-games, but have nowhere said what the essence of a language-game, and hence of language, is: what is common to all these activities, and what makes them into language or parts of language. So you let yourself off the very part of the investigation that once gave you yourself most headache, the part about the general form of propositions and of language.
>
> And this is true. – Instead of producing, something common to all that we call language, I am saying that these phenomena have no one thing in common which makes us use the same word for all. (Wittgenstein, 1958, §65)

Wittgenstein poses as an example a list of different games: board games, card games, Olympic Games, ball games, ring-a-ring-a-roses, and bouncing a ball against the wall. Next he invites us to find out if those games have something in common consider aspects such as how they stand against luck, skill, losing, winning, amusing, or patience. Wittgenstein's conclusion is that you can find family resemblances between one or other game, but nothing that runs throughout all of them.

Although there is not a central concept that gives strength to the structure of language, "the strength of the thread does not reside in the fact that some one fibre runs through its whole length, but in the overlapping of many fibres" (Wittgenstein, 1958, §67). Games constitute families, and there are family resemblances between them giving some similar characteristics between some of the games, but none that runs in all of them.

Nevertheless, Wittgenstein's thought experiments about "all sorts of language-games" help us to infer some implications. For instance, social reality is socially constructed and rooted in the "forms of life" of the actors involved. This derives from the idea that because in a language game "it is not possible to obey a rule ´privately´" (Wittgenstein, 1958, §202), the rules have to be socially constructed.

With the idea of non-private rules, Wittgenstein is contesting Descartes notion that the source of incontrovertible knowledge is inside the individual, as is pointed out by the phrase "Cogito ergo sum". The argument is that prior to the assertion, there must be some agreement about the meanings of the terms used, as these agreements are an outcome of socially constructed language games (Edmonds & Eidinow, 2001)

Also, Language Games can be iterated. When people are engaged in interactions, successful co-ordinations enable the actors to establish common ground, like, for instance, when a group of practitioners develop a method in Kotarbiński's (1966) terms. This common ground can be used as the base for future co-ordinations enabling the apparition of more complex structures such as dialects or structures of meaning particular to the participants (Moldoveanu, 2002). In the MS/ST context this could represent communities of practitioners using and developing a methodology that becomes a communication medium to facilitate, share and develop further experiences.

What is appealing from this approach for this research is that meaning came from the language and actions that constitute the use. Use came from actors and this give us a place to think about intention. Additionally everything on language is a tool. So there is the possibility to consider in an intervention all sorts of tools, word, phrases, body language (because actions are covered in the Language Game). Perhaps it can extent event to methodologies, point that I argue in the next section.

2.9.3 Methodology Use as Language Game

> Language is an instrument. Its concepts are instruments. Now perhaps one thinks that it can make no great difference which concepts we employ ... the difference is merely one of convenience. (Wittgenstein, 2001, §569)

Here, I will use Wittgenstein philosophy to understand methodology. I am looking to this for three reasons. First, in MS/ST, they are an important part of how interventions are approached. Second, I need a way to look at methodologies in which actors have a say in how they are used and, consequently, allow room for intentions. Third, there is a huge variety of methodologies. Their philosophical and theoretical underpinnings in many cases are not necessarily compatible. Under those circumstances, it is needed a philosophical perspective that will be able to refer to all of them to argue how intention plays in intervention regardless the tools employed.

The idea of using language games for understanding methodology is possible because Wittgenstein treats language as a tool for acting in the world. Examples of what we can do with it are giving and obeying orders, describing objects, reporting, speculating, forming and testing a hypothesis, translating, and asking. (Wittgenstein, 1958). Wittgenstein also poses the idea that there are innumerable numbers of language games. This opens the opportunity to propose more "tools" in terms of language games.

Mauws and Phillips (1995, p.327) argue that the concept is powerful enough to enable an understanding of organization science and managerial practice in terms of collections of diverse language games or "flexible networks of language games". In this logic, it is also possible to consider interactions, discourses, practices and interventions (a part of managerial practice) in organisational contexts in terms of Language Games.

The proposal here is a middle ground between Wittgenstein and Mauws and Phillips. A methodology is something not as simple as giving an order (although in the process of applying one, orders can be given). Furthermore, a methodology is not so big that it can encompass all managerial practice, (something more likely for MS/ST practice or a complex intervention process). A methodology can be seen as part of this network of language games; it is a game among others.

Methodologies in particular are specifically designed language games. Inventing methodologies is like "invent[ing] a language" that "could mean to invent an instrument for a particular purpose" (Wittgenstein, 2001, §492). For instance,

consider the following instruments with their purposes and their different underpinnings: System dynamics "Explore the operation of a complex real-world system to aid understanding and control"; Soft systems methodology "Learn about and improve a problematic situation by gaining agreement on feasible and desirable changes"; Critical systems heuristics "Provide support for planners and citizens to raise, explore and critique the normative implications of plans and designs" (Mingers, 2003, p.563–564).

However, it is important to clarify that what can be seen as a language game is not properly the methodology. Here I follow Kay and Halpin (1999) when they suggest that a methodology is not the written advice, principles or stages. Methodologies appear when they are put into action by actors in a context. Methodologies can be considered as language games when they consist of the "language and the actions into which they are woven".

Perhaps the power and flexibility of the concept derive from Wittgenstein using the notion of language games as "objects of comparison which are meant to throw light on the facts of our language" (Wittgenstein, 2001, §130). Using his idea as a postulate, other similarities between language games and methodologies can be proposed:

- If language games are "objects of comparison" it follows that they can be used to learn and compare against methodology use.
- The use of methodologies just as language games involves a "whole, consisting of language and the actions into which it is woven".
- Just as it happens with games, MS/ST methodologies seem to share family resemblances between some of them but not a feature present in all. You could argue a family resemblance among the methods in classic OR, or the ones in soft approaches. However, it is difficult to see the family resemblance between mathematical programming whose models rely on mathematical equations, and Critical Systems Heuristics in which non experts challenge experts through critical questions.
- Methodologies, like language, evolve, change and grow over time. "if you want to say that this shows them to be incomplete, ask yourself whether our

> language is complete; – whether it was so before the symbolism of chemistry and the notation of the infinitesimal calculus were incorporated in it" (Wittgenstein, 2001, §18).

In addition, there are some interesting 'side effects' from working with the notion of language games applied to methodologies. First, for Wittgenstein, rules in language games cannot be private, so the understanding of a methodology use needs to be seen as a social construction. Even in the case of a single use by single individual, the concepts and understanding from which s/he will draw from have their origin in social interactions.

Secondly, apart from methodology use, the interactions, languages, activities and "forms of life" in the intervention context can also be considered in terms of language games. So when we are intervening, what we are trying to do using methodologies (as a language game) is to affect the language games already in place, which is to say, we are using a tool to modify the tools that people in that context had developed in order to interact. What is more, because tools modify tools, it is also likely that the language games in place will modify the methodology in use.

Consequently, considering methodologies as language games, is not directed to shed light on the underpinnings of each methodology. It will not help, for example, to improve the mathematics behind a methodology that relies on that kind of knowledge. Considering methodologies as language games is aimed at understanding the possibilities and effects that the use of those tools has on the "activities" or "forms of life" of the actors engage in the process.

2.10 Conclusions

This chapter has provided an introduction to some concepts in the field of MS/ST and Boundary Critique. Areas towards this research aim to contribute. Additionally, the chapter also shows that, mainly by implication, intentions are already an important component of the field, yet at the same time are seriously under-researched.

For instance, concepts central to the field such as method, standard use of methodologies, and non-standard use of methodologies are or can be defined in terms of intention. Despite these links, and that it seems inescapable to produce non-standard uses in which the actors and their intentions can be directly involved, the concept of intention although recognised as important has been taken for granted in MS/ST.

All of this presents an opportunity for research that this thesis seeks to exploit: exploring the relevance of intention for MS/ST interventions. It has been stated that the main motivation for researching intentions is ethical. If actors follow their intentions, the intervention processes and the methodologies employed, the importance of their role and their accountability take a central stage. On this account, they cannot hide behind the supposed objectivity and impartiality of the tools that they use.

I proposed to use as philosophical ground for understanding intervention the notion of language games in Wittgenstein's philosophy. As a consequence, actors and their intentions became important because they give the uses to the different tools that language offers. Additionally, the concept of language games is all pervasive. It allows the possibility to talk about any methodology regardless of its underpinning assumptions; all of them require language to be of use. Moreover, Language Games covers the use of words and actions up to complex social interaction. Consequently, this argument allows to consider as Language Games not only the use of methodologies but also all the tools used to intervene in the setting.

It is to note that hereafter, I am not using the word tool in the technical sense given to it in MS/ST as is shown in Section 2.3.2. Based on Wittgenstein, I favored the use of the word tool to describe any instrument used to intervene. This includes tools such as methods, methodologies, models but also words and gestures. All of them are different, with different levels of complexity in their conception or proposed aims, but all of them are Language Games tools from the perspective advanced here.

Having outlined this basis proposition, the next chapter defines better the research problem. It will also show how I planned to go about the research process itself.

Chapter 3 Research Methodology

Chapter Two presented the field of MS/ST and the paradoxical status in which it held intentions, central but taken for granted. It introduced the philosophical framework of Language Games as a way to underpin the understanding of interventions. Additionally, it presented the knowledge gap in MS/ST, and the main and supporting questions set to guide the exploration of intention on intervention. What is the relevance of intentions for MS/ST intervention? What are intentions? How intentions can be studied?

As it has been stated this research comprises philosophical, theoretical and empirical components. This chapter focuses on providing the rationale for the guidelines of the empirical exploration in the field. It deals with how I planned my involvement and decide guidelines for the fieldwork. In other words, this chapter shows the research methodology. It is about the methodology to be use.

> A methodology refers to the philosophical framework and the fundamental assumptions of the research. Because the philosophical framework one uses influences the procedures of research, we define methodology as the framework that relates to the entire process of research. (Creswell & Plano Clark, 2007, p.4)

Despite the fact that Creswell is referring to research methodology, these ideas are in line with the discussions of the meaning of methodology on Chapter Two. Based on Kotarbiński (1966, p.439) it can be said that the purpose of the chapter is to reflect on "the proper order of actions" and what "should be the best possible preparations for later actions". In both, research methodologies and intervention methodologies, we need to reflect about our actions. However, their main concern differs. In one the goal is to improve a situation (intervention methodology). In the other, the research methodology (topic of this chapter), the bottom line is how to act in the field and how to make those actions productive to generate knowledge for the research.

In order to guide action, as a researcher, it is necessary to explicit some of the assumptions about the nature of reality and the phenomenon to be studied (Blaikie,

2007). Broadly, this involves defining what kind of research is conducted, qualitative or quantitative.

> Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between researcher and what is studied, and the situational constraints that shape inquiry. Such researchers emphasize the value-laden nature of inquiry. They seek answers to questions that stress how social experience is created and given meaning. In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes. Proponents of such studies claim that their work is done from within a value-free framework. (Denzin & Lincoln, 2005, p.10)

The central question of this research explores the relevance of intention for intervention. Having this in mind the choice clearly tilts toward the qualitative side. It is suggesting that intervention processes are not value-free. Advocating this shows that the nature of my inquiry is "value-laden". I privilege actors. Additionally, the topic deals with the "socially constructed nature of reality" in which the social experiences of intervention are created and given meaning.

Qualitative research puts the researcher in natural settings to interpret and make sense of social phenomena and the meanings that people bring to it (Denzin & Lincoln, 2005). Because of this, it needs to deal with the researcher, his situation in the world, his connection with the sites, the people and the relevant material (documents, archives). Also, like any other kind of research, it demands guidelines to connect theory to strategies of inquiry and methods to collect empirical information. Finally, it needs to deal with the issues of how to present the material and how to assure the quality and trustworthiness of the research (Denzin & Lincoln, 2005, p.25).

The role of this chapter is to show my guidelines and general approach used on the field. As Holliday (2007) suggests it deals with topics such as why the approach taken is relevant for the research, or why the setting make sense for this research.

The first part of the chapter presents a brief historical account about the origin of this project and the contacts and agreements with the participants. At the time of my first contact there was not an established research question but an idea of an area of inquiry. This was my actual involvement on the field, but this encounter help me to think how go about the research. It shows how my feedback to the team of researchers was required. Consequently, I started to focus the research in very

reflective way exploring my own intentions in each phase of the research, even the planning of the research.

How to approach to the questions is treated on the rest of the Chapter. This is done by discussing the research logic, how I assembled my approach drawing from Action Research, my stance and ethics as a researcher, the validity of the inquiry, the literature reviewed and finally, a justification of the narrative voice of the work. All these elements are reflected in relation to the advantages and constraints offered by the specific case study site.

3.1 Connecting with the Case Study Site

According, to Schein (2006) projects can be originated by the subject/client or by the researcher/consultant. However, the origin of this project can be considered more like being opportunistic and taking advantage of the situation (Holliday, 2007).

The starting point of my research project can be traced to 2001. At that time, I begin to consider the idea of studying for a PhD. However, I felt that I did not own a research topic. Perhaps I could have taken on a question given by somebody else but this was not what I wanted. Around 2002 I was developing a strong inclination for Wittgenstein's ideas and for language in general. Consequently, later in 2003 I decided to study honours on linguistic interaction but looking at this as a preparatory step for a possible PhD.

At this point, I was toying with the idea of understanding methodology use as a language game. In language games the meaning of words attaches to the way in which they are used, not to something intrinsic. What attracted me to this approach was the possibility of giving different uses to a methodology. This sounded interesting because I liked the idea of flexibility when using a tool. This was a topic for which I could embark on a PhD.

I contacted one lecturer that I met while studying my masters in England. In fact, he was responsible for putting the idea of studying for a PhD in my head. Previously I had decided to ignore the possibility, but now I was ready. For different

circumstances, I could not start a PhD in 2004. One year later the situation changed significantly. My old lecturer moved to New Zealand, so I looked for a PhD there. Now he was not in the position to be my supervisor. Instead he was now the scientific leader of a research group in New Zealand. He offered me the possibility of work with his research group in New Zealand. He was my committed strong contact inside of the organisation, something that Sarah et al. (2002) see as a key part of the research process.

In 2005, now enrolled for a PhD in Victoria University of Wellington, New Zealand, I started to work on my research proposal. As part of this preparation I had some initial contacts with the research group. Let us call this group TOP (Team Of Practitioners).

TOP was a very attractive group of participants for my research for two reasons. First, they were applying a big range of areas of knowledge to their work (systems thinking and modelling, Action Research, sociology, kaupapa Māori[5], management, psychology, biculturalism and water science). This made it promising for the research because different disciplines could mean different ways to use concepts, and this could imply different intentions in play.

Second they were looking at how to engage communities to participate in the formulation of policies for local water management. This means that they were involved in intervention. So they were applying their disciplinary knowledge, and with it, the application of MS/ST methodologies was likely.

Additionally they were a group of experienced researchers, many of them with PhD degrees, working in similar areas of interest to my own MS/ST. Since the beginning, I was aware of my status of junior researcher, researching senior researchers. TOP

[5] Most of the research on Māori communities has been done by non- Māori researchers using western ideologies. This has produced research that has imposed alien values and narratives on Māori communities. An additional effect is that most of this research has not benefited the community. Kaupapa Māori research aims to regain spaces for indigenous research. These spaces are for the indigenous researcher, for the indigenous world views and especially for the benefits of the Māori community. It is research done by Māoris for Māoris (Bishop, 2005; Smith, 1999).

presented a challenge and a very exciting opportunity. The challenge: working with a team with the knowledge and the experience to understand and to be critical about the technical aspects of my work. My relationship with them is explored in detail on Chapter Five.

They were fulfilling several criteria posed by Holliday (2007, p.34) regarding the selection of a research setting: a sense of boundary, "variety of relevant, interconnected data" such as "People to watch or interview, artefacts", richness through "different instances, facets and viewpoints", Sufficiently small and manageable, and the possibility of access to collect the data.

My first contact with them was in June 2005. They were having a two-day retreat to discuss the state of their projects and to reflect about their practice. One slice of time was assigned to the presentation of my project. At this stage, my research question was not yet formed. Consequently, I only presented generalities regarding the topic (how methodologies could be used in different ways) and the kind of philosophical ideas supporting this view (language philosophy, language games).

The purpose with this first contact was to meet each other and to see if my research was appealing for the group. I suppose that the group also needed to have a check on the researcher (me). After this encounter, while I continued the work on my research proposal, they were discussing the implications of my involvement. I was not present in these discussions, but I heard that there were some concerns about it.

First, they were worried about my presence in the sense of being an obstacle to their work. On one hand, they did not want me to be present in their actual workshops with their clients. The argument is that my presence will have to be explained and that was an additional variable in an already difficult process in itself. On the other hand, even in the case in which clients were not present, they were afraid that my lack of understanding of the issues, could lead me to ask for clarifications and on the way obstruct the flow of their work.

Second, they wanted from me some contribution to the team. If I was going to use their time and resources what could I give in return? There were discussing my contribution in terms of additional funding or feedback.

In the light of these debates, I had my second contact in October 2005. In the meeting, I elaborated on my research project. My aim for the meeting was to involve the group in the decisions and planning of my fieldwork (Rowan, 2006). I presented some handouts but I stated that the points were not fixed, and they were open to debate. The topic of intentionality was a possibility, but it was not dominant yet. My presentation focused on the kind of work that I needed to do. The members of TOP were inquiring about every aspect during the presentation, but also proposing and/or advising elements. We were heading to defining a kind of research contract.

I mentioned their concerns, the ones raised previously to the meeting, and I offered not to attend the meetings with their clients, not to be a burden with my questions in the meetings. We discussed my contribution to the group in the way of feedbacks. My organisational contact has previously presented my work as a formative evaluation. This is a way to improve the practice reflecting on descriptions of the work from a different point of view, in this case mine.

This appeared as a good idea at the time because improving their practice was a concern for them. In fact, they held regular meetings with the sole purpose of reflecting on their practice and discovering new avenues of improvement in it. I pointed out that my research was focusing on understanding how people were using methodologies in non-standard ways. I suggested that my feedback on how methodologies were used by them could be interesting for their reflective practice.

They appreciated and accepted the feedback. Then it was decided that my feedback could be periodic. This gave me the advantage of bouncing and testing ideas with them before further analysis. It was also decided that the right space for my feedbacks was their reflective practice meetings.

Moreover, a fundamental boundary was decided for my research. My research was not going to be really about TOP but about one of their projects. That means that a

big part of their activities was not to be included in my analysis. This condition covered even the reflective practice meetings in which my feedback was going to be given. I was allowed of course to use the part of my feedback in my study, but other matters discussed in this scenario were beyond my reach.

Confidentially was another issue. That is the reason for which I use pseudonyms for the project, their clients, the organization in which TOP is based, and, of course, the identities of the participants. The issues of confidentiality also covered discussions about how the information was going to be gathered, handled and stored.

The duration of my involvement was set for around nine to ten months. The idea in my head was that six months would suffice to collect information about the project. The information was to be gathered from a range of sources including: observation, access to files in their computer network, emails, and additional documentation used in the development of the project. The sources included the ones that for me were the most important: interviews and attending their planning meetings. On both occasions, I was allowed to take notes and make voice recordings. This is fundamental because I was planning to follow their use of language and also because I was aware of my limitations as a non-native English speaker.

After the six month period, I was planning to use the remaining time to write, polish and complement details about the setting receiving feedback from the group.

The meeting was very insightful for me. Not only did we develop a research contract, but I had a first "taste" of the group dynamics. I saw how they debated ideas around my project. I saw them use their experience to suggest how methods could be used, to show how my ideas resonated with some of the dynamics that they were experiencing, and how my presence was in itself an intervention that could affect their dynamics.

At the end, although there was a set of agreements, it was clear that they were not fixed. The nature of the research, studying how the dynamics of the group was changing in the process of intervention, required my adaptation and consequently, further negotiation with the team during the process, specially taking into account that I did not know what their intentions were. This was also clear in the light of my

research proposal. It was still under construction, and I did not have a concrete research question at that point.

3.2 Based on the Case Study, How to Approach the Research?

3.2.1 Some Considerations

Up to this point, some key elements for the empirical work have been defined: MS/ST the area of research, the guiding questions, the group of participants, and part of the philosophical underpinnings (more will be explained in Chapter Four). A very important one has been left pending, the approach to intention. This situation is deliberate.

One approach to answer the research question is to have a predefined way to understand intention and from this position give an explanation of how methodologies are affected. This presupposes to have clarity and faith on a particular approach to intention. At this stage as a researcher my experiences gave familiarity with MS/ST (I held a master's degree on the subject) and Wittgenstein philosophy and language pragmatics (I held an honours degree). However, I cannot say the same about intention; I never thought about the matter before the present research. When I started to confront this issue in my fieldwork, I did not even know about the existence of the Philosophy of Action (important topic for my research presented on Chapter Four).

Due to my background, my take on the problem of intention was based on Philosophy of Language. My basic assumption was that it was not so important to know what intention was because in the end this notion was relying on language. You can have an intention, but if you want to accomplish something with it, you will need to act with that intention in order to do it. The philosophical framework of language games is useful here. It let me see actions tied with language. So although I was not sure about the meaning of intention, the way to understand it was to get involved in the language games in place.

So in this way arose the second way to approach answering the question: not presupposing what was intention but learning about intention in the field to show afterwards how that intention was expressed in language. This approach gained strength after my agreements with TOP, especially because one of the agreements was to give them feedback.

Giving feedback means acting and intervening in the situation. According, to my own research assumptions, interventions are affected by the intentions of the practitioners. Consequently, for understanding what intention is and how intention intrudes on the intervention process, the first and the most at hand case of intention was my own.

Another implication of the agreements is that in giving feedback, I was in turn receiving feedback as well. As I explained TOP is a group of experienced practitioners. Any feedback that I can provide, I had not doubted it would be received in a critical way. TOP comments on my feedbacks can be seen as an opportunity to improve and tune up my understanding of my research problem.

3.2.2 Choosing a Logic for Inquiry

After picturing a broad idea of how to proceed in the research, the next step is how to support or ground the actions in some research tradition or strategy. Blaikie's (2000) work on social research provides such a foundation.

For Blaikie (2000, p.8), it is necessary to "recognize that there is no such thing as the scientific method, that there is a variety of logics of inquiry available in the social sciences, and that, in order to conduct social research, it is necessary to choose from among them". Those logics referred are induction, deduction, retroduction and abduction.

> The inductive strategy produces generalizations from data; the deductive strategy test theories by testing hypothesis derived from them; the retroductive strategy proposes causal mechanism or structures and tries to establish their existence; and the abductive strategy generates social scientific accounts from everyday accounts. (Blaikie, 2000, p.10)

These differences make each strategy appropriate to distinct aims. Induction aims "to establish universal generalizations to be used as pattern explanations"; deduction "to

test theories to eliminate false ones and corroborate the survivor"; retroduction "to discover underlying mechanism to explain observed regularities"; abduction "to describe and understand social life in terms of social actors' motives and accounts" (Blaikie, 2000, p.101).

It can be argued that answering the questions posed by my research will give me tools to generate "scientific accounts from everyday accounts". This implies an abductive logic. However, how I will arrive at those tools? What I infer from the process described in the preceding section is a process to learn about intention. Here different possibilities are stated and later tried. This process allows not only testing different possibilities but also polishing and improving the most promising.

This involves an interactive and iterative process of being aware of myself, of observing TOP, continuing my readings about relevant themes, constructing and giving feedback for TOP, and tuning my ideas of intention based on all the aforementioned and on TOP's "feedback". This process fits to a deductive strategy.

Using the literature on intention and my own learning on the field I will try different theories and hypotheses regarding my research questions, eliminating the ones that do not seem fruitful and looking for a survivor. "While the testing of hypotheses commonly involves the use of quantitative methods, it need not do so. The deductive strategy can also use qualitative methods, in which case hypothesis testing is more in terms of a discursive argument from evidence" (Blaikie, 2000, p.10).

In the field, the general idea with the deductive strategy was, through my feedback, to use some assumptions about the nature of intention drawing from the literature and fieldwork (observations, audio recordings, interviews or documents) in a way similar to Strauss and Corbin (1998). Then, on the interaction produced by the delivery, I would co-construct and check with TOP if the ideas conveyed were relevant for their practice. All this information is the base for the production of the "discursive arguments".

It is a process of imposing theories on the world and in "a process of trial and error, us[ing] data to try to reject theories. Theories that survive this critical process are provisionally accepted, but never proven to be true" (Blaikie, 2000, p.105).

Knowing what kind of logic is going to be used gives a direction on how the research methodology is going to be used. The next section focuses on explaining this methodology and explaining how it can support the aims of the research and the logic in the first phase of the research.

3.3 Tailoring the Methodology

The qualitative researcher is a bricoleur and a quilt maker. He produces a bricolage, "a pieced-together set of representations that is fitted to the specifics of a complex situation". To this aim, the researcher uses all the tools of his/her craft and all the "strategies, methods, and empirical materials at hand". Yet, "if the researcher needs to invent, or piece together, new tools or techniques, he or she will do so" (Denzin & Lincoln, 2005, p.4).

My quilt is based on the idea is that I do not know what can happen in the field. Therefore, I needed a fairly open and loose approach to be to be able to adapt to unexpected conditions. I thought more about guidelines for the field than concrete actions, methods or techniques. I saw those arising from the work in the field (as shown in Chapter Five).

It is already said that the engagement in the field can be considered a learning process, an iterative way to gain and refine knowledge about intention. An iterative approach to research "involves you going out into the field, collecting data, and subjecting these data to a critically reflective process of preliminary data analysis to determine 'what is going on' in order to build up a picture of the data emerging and to guide you in the next set of data collection" (Grbich, 2007, p.21). According, to Grbich (2007) there is a good number of approaches that can be termed iterative such as grounded theory, ethnography, or phenomenology. However, a big omission that also responds to these criteria is Action Research.

Action Research combines the possibilities of the bricolage with iterations. Under this perspective, the iterations allow deciding and tuning the use of "multiple qualitative approaches" to gather information along the process "depending on how best to accomplish practical and other outcomes deemed necessary by those involved in the research" (Reason & Bradbury, 2006b, p.xxiv). Consequently, if methods such as interviews, participant observation, and document analysis are deemed relevant they can be integrated in the Action Research Process. Additionally, "the process, method, and content of each action cycle are essentially emergent since we are learning our way forward into the future" (Sarah et al., 2002, p.540).

This implies that the research can be adapted to the requirements and changing conditions of the fieldwork. This is useful in the light of the agreements with TOP and to study dynamic language games. "The only certain object of research becomes the change itself" (Checkland & Holwell, 1997, p.11)". We have to act "on the assumption that social reality is continuously being created and recreated in a social process" (Checkland & Holwell, 1997, p.12).

Checkland and Holwell's words are a good closure to this Action Research introduction, because their work joins Action Research, MS/ST and contructionism. Constructionism as it was shown earlier is strongly influenced by Wittgenstein. So, their work shows precedents of links between the research methodology, the area of contribution and the philosophical assumptions in this research. The empathies in these areas are further explored by Flood (2006) (MS/ST – Action Research) and Lincoln (2001) (Action Research – constructionism).

The importance of drawing from Action Research for my research is that while there is a range of other iterative approaches, they do not deal with intervening and generating improvements on the participants' conditions. Aiming to produce improvements for TOP in the way of feedback was the most distinctive characteristic of my empirical approach.

There are some specific ideas in Action Research that deserve more attention for their special relevance to intention and, therefore, to this study: the cyclical process and first and second person Action Research. They are explained in the following

sections. After them, I will discuss why I cannot call this a full blown Action Research project.

3.3.1 A Cyclical Process

Action Research literature, instead of using the term iterative, uses cyclical. The cyclical process in Action Research has been expressed in different ways: planning, taking action, and evaluating the action for Coghlan and Brannick (2001); plan, act, observe, and reflect for Altrichter, Kemmis, McTaggart, and Zuber-Skerritt (2002); observe, reflect, act, evaluate, modify, and move in new directions for McNiff and Whitehead (2006). Dick (1993) argues that essentially the "action research cycle consists at least of intention or planning before action, and review or critique after".

Although all of them are very similar, Dick's conceptualisation of the cycle brings to the foreground the notion of intention. Based on this I can conceptualised my Action Research process as one in which the same object of my research is in turn one of the stages of the process for learning about it. As Dick (1993) further states "You are more likely to learn from an experience if you act with intent". If I can clarify with which intent I am acting, my process of reflection can help me to understand how intention is affecting on my intervention.

It is also here that the logic of deduction finds its expression. Having an intention to act based on a particular understanding of intention can be seen as the hypothesis ready for testing. The review and critique after action serve to "eliminate false ones and corroborate the survivor". It is important to clarify, though, that I was not looking to have a theory in scientific terms. I was looking forward to generating an understanding of the problem of intentionality in methodology use.

3.3.2 First and Second Person Action Research/Practice

Accordingly, to Reason and Bradbury (2006b) the practice of Action Research can be understood in terms of the focus of the inquiry. There are basically three ways to focus practice: first, second and third person Action Research. The first person practice focuses on the researcher. The second person practice focuses on the face to

face interaction in a group of people. The third person practice deals with third persons that are not necessarily known to the researcher, in an effort to expand the outcomes of a piece of research (Chandler & Torbert, 2003).

In this thesis, I deal with the first and the second person practice. They hold direct relevance to the research process. Accordingly, to Reason and Bradbury (2006b, p.xxv):

> First person action research/practice skill and methods address the ability of the researcher to foster an inquiring approach to his or her own life, to act awarely and choicefully, and to assess effects in the outside world while acting. First person research practice brings inquiry into more and more of our moments of action – not as outside researchers but in the whole range of everyday activities.

Using first person Action Research/practice enabled me to trace my own actions. In the process of studying intention I was like Young (2005, p.152), realising that I was "the most accessible person I have to hand!". Inquiring on my own actions and choices let me understand and clarify my own intentions and the effects that they can have in the outside world, namely on TOP. This is further expanded by the possibility that Action Research provides to enquire in the present time (Chandler & Torbert, 2003). I can reflect on my actions on the site at their occurrence.

However, according to my framework of language games, grasping an idea of the effects of my actions requires social construction. There are not private rules (Wittgenstein, 2001). Here is where second person Action Research/practice enters. Second person practice focuses on our interaction with others to deal with issues of mutual concern (Chandler & Torbert, 2003). "Second person inquiry starts with interpersonal dialogue and includes the development of communities of inquiry" (Reason & Bradbury, 2006b, p.xxvi). From the perspective of second person practice, we can reflect about language and intention in the social interaction.

"Language ceases to mean anything if its relation to intent, performance and outcome become random, and people lose trust in us if they interpret us as generating systematic incongruities that we are not willing to explore". We can explore the intent through "content and conduct". (Torbert, 2006, p.211).

To summarize: The first person let me explore my intentions. The second let me check my understanding of my intention and other people's intentions through the coherence between intentions and actions.

3.3.3 This is not Action Research

So far, I have shown how my approach resembled Action Research. It is iterative, emergent, making use of different methods on the way and reflecting using first and second person Action Research. However, this is not a fully blown out Action Research project. There are basically two big differences that are central to Action Research's nature: the kind of knowledge generated in the process and the role that the participants of the research have on the research itself.

On the first issue, consider the following definitions of Action Research:

> An approach to research which aims at both taking action and creating knowledge or theory about that action. The outcomes are both an action and a research outcome, unlike traditional research approaches which aims at creating knowledge only. Action research works through a cyclical process of consciously and deliberately: (a) planning; (b) taking action; (c) evaluating the action, leading to further planning and so on. (Coghlan & Brannick, 2001, p.xi)

> Action research is the process of systematically collecting research data on an ongoing system relative to some objective, goal, or need of that system; feeding these data back into the system based both on the data and on hypothesis; and evaluating the results of action by collecting more data. (Akdere, 2002, p.340)

As the first definition states, Action Research creates knowledge about the action. In my case, my action could be the feedback sessions. However, my plan was not to improve knowledge about how to deliver feedback sessions. I planned to use the session as a medium to reflect on my intention and to crosscheck that knowledge with TOP. Similarly, in the light of the second definition, my research problem of intention is not an objective, goal or need of the system TOP. It is a research problem, but although I considered it useful for practitioners (among them TOP), it was a problem independent of them.

Now let us consider the second issue, the role of the participants of the research. Action Research is a participative approach.

> The second dimension of action research is that it is participative, in that the members of the system which is being studied participate actively in the cyclical process. (Coghlan & Brannick, 2001, p.xi)
>
> action research is inquiry that is done *by* or *with* insiders to an organization or community, but never *to* or *on* them. (Herr & Anderson, 2005, p.3)

I planned to give feedback and see TOP's reaction. However, the cyclical process is centred on me. They served as an instance to crosscheck intermediate results of my research. This research is more a research *on* them. That is not to say that my work could not be relevant to them. I aimed to make it relevant and in this way gain more of their involvement.

For the aforementioned reasons I consider that this project is not Action Research but that can be better understood in the wider realm of qualitative research.

3.4 Researcher Stance

The stance refers to how I position myself in relation to the participants of my research. Blaikie (2007) suggests three kind choices in order to define this relationship:

1) On, for or with people, similarly to Herr and Anderson (2005) in the last section
2) Outsider or insider and
3) Expert or learner.

I do not think that you are necessarily fixed on these categories on the field. I consider, like Hammersley and Atkinson (1995, p.41), that the boundaries of a research setting "are not fixed, but shift across occasions, to one degree or another, through process of redefinition and negotiation". Part of the responsibility of the researcher is looking actively for some of these shifts.

Consequently, I know that my research is on people for advancing knowledge about intention. However, I aimed to find how to involve them on my research. I started as an outsider, but I looked forward to being seen more on the insider side through my

work. However, in the field I did not want to abandon my condition of a learner. My stance, therefore, is related to the kind of shift that I was looking for.

3.5 Ethics

From the onset of the research, I felt that intentions and ethics were intermingling. I wanted to be helpful for my participants. I wanted my ideas to be useful. I wanted to safeguard my standing as a researcher, and obviously I did not want to do something detrimental to the work or the people participating on my research. Are these intentions? Are these ethical commitments? These questions just make clear that it is necessary to prepare to reflect about ethics during the fieldwork.

How to prepare? The simplest way to go about this is to follow some code of conduct, ethical code or rules, and design some rules of engagement (Brydon-Miller, Greenwood, & Eikeland, 2006; Gallo, 2004). For instance, in this research I agreed with TOP to rules such as not interfering with the normal work, not getting involved with the clients of my group of participants and not giving the information obtained from them to others without their consent (see Section 3.1). Other rules were enforced by Victoria University were my research is based. In the Appendices to this thesis, two letters addressed to the participants are presented. One presents the project, the other asks for consent to participate in the research (Appendix 1 and 2).

However, what underpins this project is the idea that intentions change and affect our processes and tools for involvement. If that is true, it can be true also for ethical codes and rules, as Taket's (1994) work suggests. Consequently, under this perspective, "simple declarations are obviously not enough". They cannot cover every possible situation, and, even if they do, intention can change how the rule is applied. The way here is to "strive to make ethical practice manifest in every micro-decision in the work we do" (Brydon-Miller et al., 2006, p.129).

Paying attention to every micro-decision in the field is what is also called critical self reflection. About this matter Midgley (1995, p.547) says:

> There is an onus on the researcher who wants to think critically, not just to look at things from different angles, but to do so in a way that will be considered right or useful–and the judgement of what is right or useful can be made by the researcher, other interested parties, or both in communication together.

Applying Brydon-Miller et al. (2006) and Midgley (1995) arguments to what it was already said regarding the research methodology, it seems that the connection of intention with ethics strengthens further. In this light understanding intention in an Action Research process is an ethical process in itself.

Looking to be aware of my intentions is to have in view the micro-decisions in the field. Looking at the different hypothesis of how intention is affecting my intervention it reflects the idea of different angles. The co-construction of understanding about intention with my reflection and the interactions with the group creates conditions to judge more transparently (ethically?) about right and useful choices.

Although the choices are co-constructed, I cannot deny that my intention has a saying. As I see the situation, I will be balancing the drive for getting all the possible information for the research with the well-being of the participants. At the end I feel that is more ethical to prioritise the latter. This also makes sense from an Action Research perspective.

3.6 Can I Act on the Findings?

There are many concepts that refer to the quality of qualitative research, for instance, internal and external validity, reliability, objectivity, credibility confirmability, structural corroboration, rhizomatic validity. (Creswell, 2007). Guba and Lincoln (2005, p.205) argue that what all this terminology is trying to answer is that whether we can have such confidence in the findings that we can act on them. For "we" I mean obviously me and others. How can I feel confident myself and how other people can be confident on the outcomes in such a way that we all can act on their implications?

As it was already explained, this is research uses the logic of deduction. How is confidence obtained here? Strictly speaking under the logic of deduction you are not gaining confidence about knowledge. The process is one of the falsification of hypotheses in a Popperian sense. You find reasons to discard ideas or hypothesis. The confidence about what it remains arises because it had survived our efforts to discredit it.

How does this relate to the Action Research components from which I am drawing? To start with it has been said that Action Research is experimental research (Styhre & Sundgren, 2005). This means that every Action Research cycle can be used to develop hypotheses in the shape of our understanding of the concepts and/or situation. Next, these hypotheses can be cross-checked with the participants in order to test them. The test here is not necessarily an experiment in the positivistic sense, as qualitative research applies testing as argumentation (Blaikie, 2000). In order to construct this argument some evidence is necessary. This evidence comes can come from "the experiments" and other sources such as interviews or the same interaction on the feedback sessions.

Although I argued that my project cannot be seen as a full-blown Action Research project, I can use some of its criteria of quality. The criteria aim to give confidence on the process and the evidence. Consequently, the evidence and the process can be valued in a better light if there is evidence of an overall process accompanied by: evolving actions, a good quality in the relationship with the participants, collaboration, a research that energises researcher and participants (Herr & Anderson, 2005), a research validated by the participants, the extension of ways of knowing, and significant work (Reason & Bradbury, 2006a).

Debating the arguments in this way will allow to what Checkland and Holwell (1997) refer as the possibility for "interested outsiders" to recover the process. Making visible the "epistemology (the set of ideas and the process in which they are use methodologically) by means of which they will make sense of their research, and so define what counts for them as acquired knowledge" (Checkland & Holwell, 1997, p.20).

If the concepts tested survive the attack that does not necessarily translate as their validity, but certainly it is easier to act on concepts that we find difficult to disproof.

3.7 About the Literature Reviewed

This research involved going through mainly three bodies of literature: MS/ST, Language Pragmatics, and Philosophy of Action. In general, the process of finding the relevant literature followed a snow ball technique. I used some terms derived from previously known texts to search the databases. Those terms hit some articles and journals. Sometimes, the articles produced more terms. Eventually, the journals found, turn out to be "mining fields" that were examined for several years. Here, I am showing those journals that were explored at least four years. However, there were some specificities in each one of the bodies of literature.

MS/ST from the perspective of Critical Systems Thinking was a body of literature that was familiar to me before embarking on the research. I was familiar especially with the top Journal in the area *Journal of the Operational Research Society,* covering the work from the mathematical to the philosophical. Additionally I was familiar with journals related to the work at Hull University in UK: *Systems Practice* that later became *Systemic Practice and Action Research* and *Systems Research* that later became *Systems Research and Behavioral Science*.

Through searchers I also became acquainted with other journals in the area such as *Omega* and the *European Journal of Operational Research*. Those are similar in nature to the *Journal of the Operational Research Society*. Additionally I found useful some of the work in *Kybernetics* a journal focused on cybernetics one of branches in systems thinking.

The way in which I proceeded was looking first to some leading figures on the field such as Jackson, Midgley, Mingers, Ulrich and Checkland. As the research progressed I was looking for information about the history and development of the area, but also about some central concepts such as methodology, methods and standard and non standard uses of them. In this exploration topics about meta

methodologies and pluralism were also important. I also explored Boundary Critique theory in depth to help me make the link with the specific work on intentions.

Soft Systems Methodology was an important search term not only for the theoretical discussions on some of the topics mentioned above, but also for their methodology for intervene. This was useful for my own work on the feedback sessions. Finally in this body of literature was important to look for making accounts of the intervention process and ethics.

The following body of work was that of Language Pragmatics. I was familiar with this body of work, mainly thanks to the reading of seminal works in the area but in Spanish translations. I did not know of any Journal but with some work, the *Journal of Pragmatics* emerged as the undisputed reference. I devoted a lot of energy on this Journal checking work from 1997 to 2007. I planned to use several of the ideas of how to analyze communicative interactions. However, I ended developing my own way so it is not apparent in my text how much I own to the readings here. I also have to say that based on the readings of this Journal, I tried different underpinnings for my proposal before settling for Relevance Theory (as it will be introduced in Chapter Four).

In this area, I was looking mainly for intention because I knew that this topic was treated from this perspective. Additionally, because I was aware of the need to understand interaction, consequently, I looked for interaction, pragmatic interpretations, and context. I also look for specific ideas in philosophy and theory such as Wittgenstein, Philosophy of Language, Relevance Theory and Blending (topic that I considered for long time, but it did not make it).

The final main body of literature was that of Philosophy of Action. I was not aware of the existence of this area. I came across with it thanks to Enç's (2003) book *How We Act: Causes, Reasons and Intentions*. Finding this book was more the work of serendipity. Before this book, my search for intentions was not giving me interesting results. After the book, I learnt some vocabulary, and some authors that made my searchers easier and allowed my vocabulary to grow. I used terms such as intentional action, plans, belief, desire, wayward chains, deviance, luck, experimental philosophy,

side effects, trying, agent causation, causation, reasons explanations. On the author's side, I focused on Bratman for the clarity and wide acceptance of his ideas and on Mele because he reviews all the debates on the field.

Although I found a very scattered literature, the main Journals for my work were: *Analysis* (a good mix of philosophy of action and language), the *Journal of Cognition and Culture* (dealing with experimental philosophy) and *Philosophical Psychology* (philosophy of action from a more theoretical line).

I also have to mention that in broader philosophical themes concerning action, language, systems thinking, complexity and intention, the journals *Philosophical Studies* and *Philosophy of the Social Sciences* were important sources of insight.

Out of the Journals I consider that these books were crucial for this thesis:

- *Philosophical Investigations* (Wittgenstein, 2001)
- *Relevance: Communication and Cognition* (Sperber & Wilson, 1995)
- *Systemic Intervention: Philosophy, Methodology and Practice* (Midgley, 2000)
- *Dynamics in Action: Intentional Behavior as a Complex Sys*tem (Juarrero, 1999)
- *Forms of Explanation: Rethinking the Questions in Social Theory* (Garfinkel, 1981)

3.8 Narrative Voice

I am using a number of narrative voices in this thesis. Each one of them has a purpose. In general, I use third person to explain other's people concepts or presenting arguments that are not involving my personal state. I use the first person of the plural in two cases. One case refers to the fieldwork when I am talking about a situation involving both my participants and I. However, I also use this person following the example of authors in the different fields from which I am drawing such as Philosophy of Action or Boundary Critique Theory. When they use this person,

they are trying to show a phenomenon or situation that is applicable to all of us as human beings.

Perhaps the use that some can find more controversial is that one of the first person singular (I). However, there is a good number of reason to justify this choice. For instance, as it can be seen from the quotes in this work, the disciplines from which I am drawing, make use of it. So there is support from the academic community to the idea. Second as this chapter argues this is a qualitative research, consequently, there is an "intimate relationship between researcher and what is studied, and the situational constraints that shape inquiry." And as Denzin and Lincoln (2005, p.10) continue to express researchers in this tradition "emphasize the value-laden nature of inquiry."

This is especially true in a research about intention where as I declare following Young (2005, p.152) I was "the most accessible person I have to hand!". As I had shown in this chapter being aware of my own choices, actions and biases using my own experiences is an important source of data. Because I stated that this is not a full Action Research project, I cannot use it as argument to justify a first-person narrative. However, I can point out that I am drawing from one of its aspects: first-person practice. Additionally, the description of my own circumstances is coherent with Auto-Ethnography (Holman Jones, 2005). Together with Self-Study, they had been even recognized as fruitful approaches for Action Research (Herr & Anderson, 2005). All of them allow a first-person narrative.

Basically, in the process of disentangling intention, I was avoiding the problem of hiding myself behind the researcher (Becker, 2007; Law, 2004; Simpson, 2006). The understanding of my own intention is fundamental for the research, and the account of my own intentions will be obscured if narrated from a perspective different from mine.

3.9 Conclusions

This chapter defines the guidelines and general approach for the research. These are based on contacts with the participants of my research. It was shown how my initial agreement with them shaped the methodology to be followed in the field. This

methodology is iterative, and looks to learn in successive cycles about intention following a deductive logic. It works testing different ideas about what is an intention and its suitability to explain what happens in the field.

The sources for the ideas or hypotheses tested are literature about intention and my own insights in the situation. This testing process generates evidence that can be used in "discursive arguments" to filter ideas of intention. If the ideas are not strong enough they will be dropped or improved.

Without being a full blown Action Research project, I draw from it for several reasons. It allows me to incorporate the feedback that TOP demanded from me as part of the research. In this way, I can have opportunities for participation and co-construction of knowledge for my research. Also, Action Research through its first and second person Action Research practice let me reflect not only on other people's intentions but also on my own.

Additionally, Action Research let me respond and adapt to changes that are likely to occur in the field. In fact, changes are expected. Dick (1993) points out that if you do not change the approach why use Action Research? It has also been described as "Designing the plane while flying it" (Herr & Anderson, 2005, p.69).

The chapter also discusses my stance as a researcher and my ethical position. Regarding my stance, I was looking to involve my participants in my research, planning to shift an initial status of an outsider for an insider and keep my position as a learner through all the process. On ethics, I start from the idea that intentions and ethics are necessarily intermingled. Consequently, it is necessary to take ethics into account. It is shown that despite following some codes, these are not enough in light of the idea of intention. I follow the notion that reflection about every micro-decision is important for understanding the implications of my decisions on the field.

Finally, the topic of criteria for quality is discussed, reflecting on how we can have confidence to act on the findings of the research. This validation takes criteria usually applied to Action Research in which the relationship and the way in which the knowledge is constructed with the participants are central.

The next chapter presents ideas from philosophy of language, language pragmatics and philosophy of action. They are the philosophical and theoretical source of the hypotheses to be tested in relation to intention.

Chapter 4 Preliminary Philosophical and Theoretical Exploration

Chapter Three shows the research methodology. The core idea in it is to learn about intention contrasting the empirical experiences in the field with conceptual approximations to intention from philosophy and theory. The role of this chapter is present those preliminary philosophical and theoretical concepts needed to feed the contrasting process on the field.

I follow Benett and Hacker (2003, p.439) in their understanding of philosophy:

> 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.

Lundberg and Young (2005) state that "Research without theory is meaningless; theory without research stagnates". Theories are used to explain the phenomenon. Without theory, it cannot be seen how intentions can be pertinent and useful for MS/ST. Without research, there is no basis for theory development.

The purpose of this chapter is to explore some forms of thought, and some ways to explain intention. In this regard, the chapter is working towards answering the supporting questions: what are intentions? And, how to study intentions on interventions. The perspectives used are Language Pragmatics and Philosophy of Action.

Because the grounding for the concept of intervention is based on language, the first approach to intention explored is also based on it. Language pragmatics is a field of knowledge strongly influenced by philosophy of language and especially the work of Wittgenstein. Additionally, as will be explained through Relevance Theory, it provides a way to consider intention linking it with communication and its effects on

a situation. This is important because the purpose here, is to look for ways to understand how intentions can be applied in interventions and how to study them.

The second way to consider intention relies more strongly in philosophy. In philosophy the intentionality has two different meanings (Malle, Moses, & Baldwin, 2001). The first sense of intentionality lies in the realm of phenomenology. It is "the aboutness or directedness of mind (or states of mind) to things, objects, states of affairs, events" (Siewert, 2007, p.1). In other words, certain states of the mind such as belief, hope, and desire are directed or can be directed towards something. For example, I can desire a new car. The state of mind (desire) is directed to something, the new car.

The second meaning falls in the field of philosophy of action, which as pragmatics also has Wittgenstein as a forerunner. This meaning refers to the property of actions that make them purposeful, (Malle et al., 2001). A casual event is different from an event that we produce on purpose. "What is left over if I subtract the fact that my arm goes up from the fact that I raise my arm?" (Wittgenstein, 2001, §621).

The kind of intentions that are implied in the first meaning have been explored in MS/ST, mainly through phenomenology and the work of authors such as Fuenmayor (1991b; 1991c) and Georgiou (2003; 2007). However, if the problem to consider is intervention, philosophy of action, the second meaning, seems a more suitable field for exploration. One reason is that the notion of intervention implies purposeful action (Midgley, 2000). This matches with the importance of action in philosophy of action mentioned earlier (Malle et al., 2001). A second reason is that concepts such as 'modes of action' and 'standard uses' imply action no a mental state. Despite these points in common the second meaning has not been explored in MS/ST.

Consequently, this chapter starts an exploration of different ways to understand intention from the perspective of Philosophy of Action. As it will be shown, there are different ways in which this concept has been conceptualised in the field. At this point, the purpose is not to define which one of them is best for this research. The purpose instead is to have a pool of options for assisting in the interpretation of

fieldwork data. Much of my understanding of what is presented here was gained through my fieldwork and further studies and reflections after my involvement.

The chapter starts showing how Language Pragmatics relates to Wittgenstein philosophy and how, using this approach, there is a way to link intentions, communications and effects. Afterwards, intentions are explored from the point of view of Philosophy of Action. With two different fields of knowledge approaching intention, the last section explores the question of the kind of relationship that they could have. Finally, some implications for the work on later chapters are presented.

4.1 Intentions in a Language Game

Ideas about language can not only give us a grounding to think about methodologies, as in the case of the last section. It can also give us ways to think about intention. In this section I will explore some work on language pragmatics that connects with Wittgenstein philosophy and ways to understand intention.

Wittgenstein influence is notorious in language pragmatics. "Ludwig Wittgenstein is not only a proto-pragmatician, but also the first modern pragmatician" (Kopytko, 2007, p.807). Language pragmatics follows some of the assumptions in Wittgenstein's philosophy. For instance, the field can be defined as "the systematic study of meaning by virtue of, or dependent on, the use of language" (Huang, 2007, p.2).

This section will continue to explore some Wittgenstein's ideas, specifically the rules present in a language game. This will open the way to talk about intention and Relevance theory, a way to relate intention, communication and effects.

4.1.1 Language Games and Rules

> In philosophy we often *compare* the use of words with games and calculi that have fixed rules, but cannot say that someone who is using language *must* be playing such a game. (Wittgenstein, 2001, §81)

If we play with fixed rules, the likely outcome is that we will refer to standard uses of methodologies. However, Wittgenstein is suggesting that this is not the only way to play. However, what exactly can it mean not playing with fixed rules?

According to Wittgenstein, rules can be changed, created, or eliminated, "as we go along" (Wittgenstein, 2001, §83). "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). Under those circumstances, the rules on many occasions are not clear, incomplete, or even incoherent, but nevertheless people are able to accomplish tasks (Fogelin, 1996). This idea is also suggested by empirical research (Galantucci, 2005).

Wittgenstein's view also involves the notion that rules have multiple uses. So it is possible to use rules to communicate and to condition behaviours. Sometimes we are aware of their existence but we choose not to follow them, and, even if they are not explicit, they can be inferred from the context. In this picture:

> A rule stands there like a sign-post ... is there only one way of interpreting them? – So I may say, the sign-post does after all leave no room for doubt. Or rather: it sometimes leaves room for doubt and sometimes not. (Wittgenstein, 2001, §85)

So basically rules guide but not rule. They help to make sense of what is happening and not necessarily are determining an outcome.

Language pragmatics, which is a field in which Wittgenstein is regarded as a pioneer (Bertucelli Papi, 1996; Huang, 2007), has proposals that work along these lines. One of them looks to move the understanding of communication from *rules to code-decode information* to *principles that help to infer it*.

In the first model, in order to understand a message, the actors need to code and decode based on a common code (Littlejohn, 1999; Van Der Wiele, 1995). In contrast, in the inferential model proposed by Grice (1989), the speaker tries to show her/his intentions, and the hearer will try to make inferences based on his/her knowledge, the context and the evidence provided.

It is possible to profit from inferential communication without talking. For instance, if work has to be done, I can leave the documents on somebody's desk. In fact, it is also possible to take advantage of inferential communication by breaking rules when trying to convey a meaning. For example, people can be aware of X's knowledge about etiquette, so if X is not following the etiquette possibly X is using that knowledge to convey a special meaning, perhaps a joke, irony or a low opinion of the host. So etiquette here does not behave as a rule but as a principle that conveys Wittgenstein's idea that rules work just as a guide.

What is novel in this way of conceptualising communication is we are not restricted to singular ways to compose and understand messages. "Meaningful sentences necessarily have lots of predictable inferential connections with lots of other meaningful sentences" (Rorty, 1999, p.37), and what is more, body language and behaviours can also be meaningful (Wilson & Sperber, 2002a) and, consequently, can connect with lots of other meaningful gestures, behaviours and sentences.

Understanding communication based on inferences and principles offers us the possibility of meanings conveyed in different ways and, consequently, suggests the possibility of different uses. For instance, Leech (1983, p.8) proposes that principles used to study language can display the following characteristics:

> a) Principles/maxims apply variably to different contexts of language use.
> b) Principles/maxims apply in variable degrees, rather than in an all-or-nothing way.
> c) Principles/maxims can conflict with one another.
> d) Principles/maxims can be contravened without abnegation of the kind of activity which they control.

Furthermore, approaching this research understanding the use of methodologies as language games, the rules in terms of pragmatic principles, and communication in terms of inferences, opens an avenue to the problem of intention as the next section explains.

4.1.2 Communicative Intentions

As was already mentioned, a way to approach language pragmatics is looking it up through principles. Additionally and according to Kopytko (2007), pragmatics follows Wittgenstein ideas on contextual language games, family resemblance and the project of weakening the notion of rule. However, Wittgenstein is not the only strong philosophical influence in the field. Grice a 'fellow' philosopher also makes part of what is known as the school of ordinary language philosophy, and is responsible for the introduction of the notion of principles in Language Pragmatics (Huang, 2007). Grice's work has led to a "philosophically inspired pragmatic theory of language use" (Huang, 2007, p.3).

The central concern of his work is to understand how utterances with the same syntactic and semantic structure can have multiple meanings. People can say "please" but the different intentions on the use of that word can have different effects in the context. Just to mention some possibilities, please can be a command, a request, or a beg. Consequently, meaning is related to the intention of the speaker. In turn the intention of the speaker can be seen through the effects that the speaker is looking for. According to Grice (1991, p.92):

> "U meant something by uttering x" is true iff, for some audience A, U uttered x intending:
> (1) A to produce a particular response r.
> (2) A to think (recognize) that U intends (1).
> (3) A to fulfill (1) on the basis of his fulfillment of (2).

Obviously, it is possible to achieve effects without people realising that the speaker has that intention. This can be called deception (Wilson & Sperber, 2002a). However, Grice (1991) refers to a communicative intention. This kind of intention is achieved when the audience A produces the response that the Speaker U is looking for in part because the audience recognises the intention. This form of conceiving intention takes into account a socially constructed understanding of the phenomenon because "to communicate effectively participants in conversation must take each other's perspectives" (Albright, Cohen, Malloy, Christ, & Bromgard, 2004, p.291).

Developing on these ideas, Relevance Theory, proposes a pair of distinctions:

> a. The informative intention: The intention to inform an audience of something.
> b. The communicative intention: The intention to inform the audience of one's informative intention.
>
> Understanding is achieved when the communicative intention is fulfilled – that is, when the audience recognises the informative intention. (Wilson & Sperber, 2002a, p.255)

As an illustration, consider two ways for obtaining water from your host. In one you put your empty glass in the line of vision of the host. You have the informative intention of informing your host that your glass is empty. Not necessarily are you letting know your host that you want to inform him about the fact that you want water. This is an informative intention without communicative intention (Sperber & Wilson, 1995). For communicative intention, you need to ask directly or make a clear signal of the fact that you want water. You let others know that you want to let them know something.

These ideas of considering intention in relation to impacts and letting other people know about our intentions are coherent with Wittgenstein's ideas. For him, there is no way to access people's internal states. This is not denying the existence of mental states, but it is suggesting that they cannot "be taken to be merely referential" (McHoul & Rapley, 2003, p.509). People can observe behaviours and, based on how rules are followed, they judge their degree of understanding. Consequently, people can adjust intentions and their manner to convey messages, hence changing the language games in place.

4.1.3 Relevance Theory

The concepts of language pragmatics introduced so far show us a way to understand flexible rules for language games through principles (Leech, 1983), and crucially it also shows a way to relate intentions and effects. As it was shown, Grice (1991) proposed that meaningful communication required the need of a response of an audience, the recognition of the audience of some intention by the speaker, and the production of the response based on the recognition of the intention of the speaker. This idea enables us to see intentions as something that produces some effects.

However, Grice's work is not explicit about ways to define those effects in communications. For this reason, I turn now to Relevance Theory (Sperber & Wilson, 1995; Wilson & Sperber, 2002a, 2002b). "Relevance theory may be seen as an attempt to work out in detail one of Grice's central claims: that an essential feature of most human communication, both verbal and non-verbal, is the expression and recognition of intentions" (Wilson & Sperber, 2002a, p.249). In other words, communication is about "guessing" the intention of the speaker and building on that to 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 and Wilson (1995, p.64).

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 a communicative stimulus.

This set of assumptions, the cognitive environment, is always affected when 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, pp.61–62).

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, 2002a, p.254). In other words, it does not matter how strange is a stimulus, we look for the piece(s) of knowledge that let us make the stimulus more meaningful. This is what Wilson and Sperber (2002a) call the cognitive principle of relevance.

Two conditions are defining then if it is productive (relevant) to consider a stimulus in a communicate 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, 2002a, p.252)

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 as inferences. In other words, when we are trying to communicate something, we show others that they can connect our messages with their cognitive environment, and that they do not have to work much in order to do it.

Relevance is in this way 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 through relevance to obtain the maximum productivity for the effort. However, the process of evaluating those effects is not quantitative. You cannot measure the productivity of an assumption by a number. Sperber and Wilson (1995) argue that relevance is a comparative criterion. We can know that an assumption is more relevant than another one. Without something against which to compare and judge, we cannot say if an assumption is relevant.

This approach has a methodological implication regarding the empirical work. From the idea of communicative intentions in Relevance Theory "How does one recognise another individual's intentions?":

> One observes his behaviour; using one's knowledge of people in general and of the individual in particular, one infers which of the effects of this behaviour he could have both predicted and desired; one then assumes that these predictable and desirable effects were also intended. In other words, one infers the intention behind the behaviour from its independently observed or inferred effects. (Sperber & Wilson, 1995, p.32)

These are basically the same assumptions used by Torbert (2006) (Chapter Three), regarding why we can rely on our observations of intentions. If the predictable and desirable effects were not intended, we will lose confidence in that actor, making it difficult for that actor to pursue further engagements.

4.2 Intention in Philosophy of Action

The fact that MS/ST has not explored this sense of intention is not strange. The truth is that the concept has been neglected at large in human sciences and philosophy. Bruner (2001) exposes two reasons for this situation:

- The dominance of positivism means that mental states as intentions were seen as subjective and without explanatory power.
- According to psychoanalytic theory people really do not know what their real intentions are. Intentions are unconscious. Psychoanalytic therapy set to uncover these hidden intentions. Therefore "the transparency of intentions was seen as deeply problematic" (Bruner, 2001, p.x)

However, currently there is a significant body of work that challenges these views in areas such as philosophy (Benett & Hacker, 2003; Bratman, 1987; Mele, 1997b; Saaristo, 2006), psychology (Malle et al., 2001), cognitive science (Baldwin & Baird, 2001; Stone, 2004), law (Audi, 1994; Malle, 2006), child development (Meltzoff & Brooks, 2001), primatology (Zelazo, Astington, & Olson, 1999), language (Astington, 1999; Borg, 2004; Gibbs Jr., 2001), artificial intelligence (Hendriks-Jansen, 1996; van der Hoek, Jamroga, & Wooldridge, 2007; Wallis, 2004), and education (Sinatra & Pintrich, 2003).

Because the purpose of the chapter is to make a conceptual-philosophical exploration, I will use Philosophy of Action, the branch of philosophy that studies action and intention. Actions are important in the effort to produce explanations of intentional

human behavior. In explaining action, philosophy of action pays special attention to notions in "folk philosophy". "Much of our understanding of ourselves and others is rooted in commonsense psychological framework" (Bratman, 1987, p.1).

Every person relies on intuitive concepts such as beliefs, desires, plans, reasons, intentions and so forth to explain other people actions. For instance, a mere description of movements does not make much sense, unless we attach them to an intention. Philosophy of action aims to clarify what is behind of all these concepts (Mele, 1997a).

Intentions play important roles in human action. Without them actions will not be interesting and "perhaps there would not be actions at all" (Mele, 1997a, p.16). Intentions can cause, sustain and guide action. They can "get reality to match the content of the intentional state" (Searle, 2004, p.168). They enable us to make sense, explain and rationalize our actions and those of others. Consequently, they are fundamental in helping to coordinate the interactions between groups of actors (Baldwin & Baird, 2001; Enç, 2003; Mele, 1992).

In the light of these ideas, explorations of the concept of intention seem very relevant to MS/ST intervention. Intervention is about acting purposefully to produce change (Midgley, 2000); as in Philosophy of Action, merely causing action is not enough: action needs to be guided by actors. The use of a methodology requires sustained action. Additionally, the application of interventions methodologies requires coordinating my actions or the coordination of my actions with those of others. All of this is showing potential contributions from Philosophy of Action for the theory and practice of MS/ST.

However, approaching the concept of intention entails some difficulties. First, in the realm of philosophy of action there are many competing viewpoints on the concept. Second, there is not the advantage of previous works on intention in MS/ST. Having previous work can simplify the exercise of building a critique on what has been done. Because this avenue is not open, the option here is to show some of the approaches to intention, not aiming to take a side yet, but only as a way to sensitize to the different possibilities.

The section is divided into three parts. The first part is aimed to sensitize the reader with some of the debates and theoretical difficulties to identify when a situation was shaped by intentions. This shows also that intention is not a clear or obvious term. The second part shows how intention is double faced; referring to it, it is to deal with two problems at once. The third part explores some of the literature and identifies some approaches to understand intention. This will serve as a pool of resources to contrast against the experiences in the fieldwork.

4.2.1 Some Problems for Pinpointing an Intention

When do we have the intention of doing something? When are we acting intentionally? In looking for answers to these questions, the tradition in philosophy of action has been to construct and examine cases. Some of these have attracted long debates. They are used to support, challenge or refine definitions of intention or broad approaches to the issue.

Now, I will show some cases to illustrate the difficulties in pinpointing and knowing if the situations developed due to an actor's intention, when luck, side effects, wayward chains, and moral issues are considered or present.

Take for instance, the problem of luck in this case explained by Mele and Moser (1994). The situation here is about a nuclear reactor about to explode. The only way to stop the explosion is to type a 10 digit code in a terminal. The operator does not know the code. Nevertheless, he types something, and is lucky that it is the right code and prevents the explosion. It was his acting intentional? Typically, we are reluctant to think that an action is intentional if luck plays a huge role in the outcome.

Side effects are a second problem. In this case by Harman (1997) a sniper is about to kill an enemy soldier. However, he knows that the noise of the shot will alert other enemy soldiers. He thinks that is a sensible trade-off. He fires his weapon, kills the enemy soldier but now everybody knows that he is around. Alerting the enemy will be a side effect. But, did he intentionally alert the enemy?

Wayward chains, the third problem is concerned with the appropriate path to the outcome (Enç, 2003). It refers to those sequences of actions or events that deviate from the prefigured course that the actor has in mind. Consider this case explained by Mele and Moser (1994). Somebody shoots to kill a person. He aims at the heart but by a minor deviation the bullet hits the head. Here the deviation from the prefigured course is small, and we tend to think that effectively the killing was intentional.

However what happens when there is a big deviation? For instance, this case by Bennet cited by Schlosser (2007, p.188): "A sniper has the intention of killing an enemy by shooting him. He carries out the intention, but misses. By producing the noise of the shot, though, he stampedes a herd of wild pigs, which trample the poor enemy to death". This case can be seen in Figure 4.1

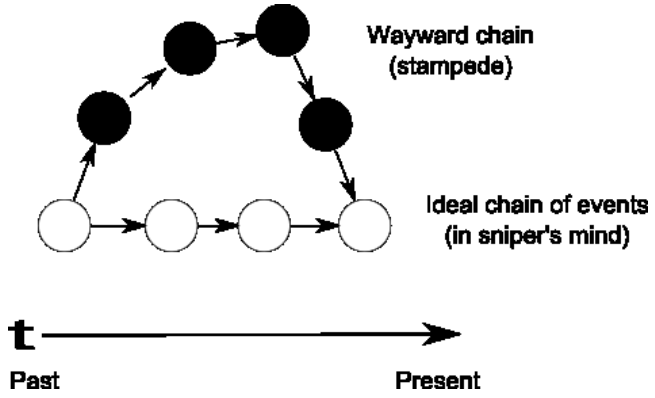


Figure 4.1. Wayward Chain.

The white circles represent the sequence or chain of actions in the sniper's mind. The black circles represent the deviation, the stampede that was not prefigured. The chains share the beginning (shot by the sniper), and the end (death of the enemy). However, it is a matter of discussion for philosophers of actions the role of the sniper's intention on the death of the enemy by the stampede. Did he kill intentionally? In fact, wayward chains are seen more as a problem than a concept useful for understanding intention.

It is easy to see these problems arising in intervention processes. A practitioner could be really bad in applying a methodology, but he can cross with a very supportive and engaged group and because of this, the intervention is a success. In pursuit of a greater good a practitioner has to compromise with some side effects. The practitioner can

also imagine a sequence of actions to achieve one outcome and, however, achieve that outcome through a very different unplanned sequence.

In the light of these kinds of problems, analyses of intention try to specify all the necessary conditions that allow us to call something intentional. Definitions then come to be highly complex. Consider this definition of intentional action by Mele and Moser (1994, p.63).

> Necessarily, an agent, S, *intentionally* performs an action, A, at a time, *t*, if and only if:
>
> (i) at *t*, S A-s and her A-ing is an action;
> (ii) at *t*, S suitably follows – hence, is suitably guided by – an intention-embedded plan, P, of hers in A-ing;
> (iii) (a) at the time of S's actual involvement in A-ing at *t*, the process indicated with significantly preponderant probability by S's on balance evidence at *t* as being at least partly constitutive of her A-ing at *t* does not diverge significantly from the process that is in fact constitutive of her A-ing at *t*; or (b) S's A-ing at *t* manifest a suitable reliable skill of S's in A-ing in the way S A-s at *t*; and
> (iv) the route to A-ing that S follows in executing her action plan P, at *t* is, under S's current circumstances, a suitable predictively reliable means of S's A-ing at *t*, and the predictive reliability of that means depends appropriately on S's having suitably reliable control over whether, given that she acts with A-ing as a goal, she succeeds in A-ing at *t*.

Here the authors are defining intentional action in a way that requires: skill (no luck involved), appropriate guidance of the action, and actions really contributing to the goal. However, even this complex analysis does not consider moral issues. Consider these cases by Knobe and Burra (2006, p.117):

> The vice-president of a company went to the chairman of the board and said, 'We are thinking of starting a new program. It will help us increase profits, but it will also harm the environment.' The chairman of the board answered, 'I don't care at all about harming the environment. I just want to make as much profit as I can. Let's start the new program. 'They started the new program. Sure enough, the environment was harmed.

And now let us contrast this vignette with another – the *help vignette* – that is constructed by replacing the word 'harm' with 'help.'

> The vice-president of a company went to the chairman of the board and said, 'We are thinking of starting a new program. It will help us increase profits, and it will also help the environment.' The chairman of the board answered, 'I don't care at all about helping the environment. I just want to make as much profit as I can. Let's start the new program.' They started the new program. Sure enough, the environment was helped.

When the intentional actions and intention of the chairman are considered, it makes a difference to think about these cases in terms of harm or help. In a survey, people were asked if the chairman intended or acted intentionally in each one of the cases. The following results were obtained (Knobe & Burra, 2006).

Percentage saying 'yes'	Intention	Intentionally
Help	0%	20%
Harm	29%	87%

When the environment is helped it is easier to think that the chairman does not intend to do it and is not intentionally helping the environment. However, when the environment is harmed the judgement changes drastically. Now it is easier to blame him.

4.2.2 Present and Future: The Dual Face of Intentions

It can be noticed from the explanation above, that Philosophy of Actions is a highly contested area. There are few agreements. One of the few is Bratman's distinction of intentions as a two-faced phenomenon: "We do things intentionally, and we intend to do things" (Bratman, 1984, p.375). Doing things intentionally is about the present and is referred to as intentional action. Intending to do things is about the future and is what it is specifically called intention. So talking about intentions seems to imply a duality and a kind of relationship between both sides.

There are several ways to think about the relationship between these two sides of intention. The simpler one, called simple view, states that it is necessary that a Subject (S) intended to do an Action (A) in order to do A intentionally (Bratman, 1984). This means that, for example, if I take the bus intentionally is because I intended to take the bus.

However, the simple view is not always clear. For example, in an example by Harman (1997), a sniper knows that in killing an enemy at the same time he is alerting the enemy. This is not very different from a practitioner purposefully acting for a change and having to deal with some side effects on the way. In both cases, although

the action is intentional is difficult to say that he intended to alert the enemy or the side effects. Under this view, an agent that does A intentionally is intending something, not necessarily A. This view is called the single phenomenon view (Bratman, 1984).

Basically, the debates between the single view and the single phenomenon view are the main ones about the nature of the relationship between intention and intentional action (Adams, 2006; Adams & Steadman, 2004a, 2004b; Knobe, 2003a, 2003b, 2004; Knobe & Burra, 2006; McCann, 2005; Mele, 2003, 2006; Nadelhoffer, 2006).

4.2.3 Some Approaches to Understanding Intention

4.2.3.1 The Belief-Desire Model

The belief-desire model is perhaps the most popular approach to intention. It sees intentions as mental states but not mental states on their own. Intentions can be decomposed and reduced to 'simpler' parts. This way to conceive intention figures prominently in how everyday people understand intention (Malle & Knobe, 1997). Furthermore, it is an important approach in philosophy of action, "According to a long tradition, intention can be analyzed into cognitive and motivational components" (Davis, 1997, p.132). Belief is the cognitive component, desire is the motivational.

The problem is then how to explain the relationship between them (Bratman, 1987; Davis, 1997). Let us briefly describe Davis's (1997) analysis of this relationship to explain the intention to do something in the future.

One requirement of intention is rationality. This is provided by the component of beliefs. I know that I cannot intend to win the lottery. It does not matter how strongly I desire to win the lottery, I know that my desire will not suffice to win it. I can realise this based on my beliefs that represent my understanding of the world. However, obviously believing that something can be done is not enough to cause my actions to move in that direction. So a second, now motivational component with causal power such as the desire is also necessary (Davis, 2005).

Davis also explains that I can have the belief that a tennis player has a chance to win a tournament. I can also have the desire of his winning the tournament. However, it cannot be said that I intend for him to win the tournament. The problem here is that "the belief and the desire are not connected in the appropriate way" (Davis, 1997, p.141).

Davis (1997, p.147) argues that an appropriate way to connect these elements is: "S intends that p iff[if and only if] S believes that p because he desires that p and believes his desire will motivate him to act in such a way that p". For example, I intend to finish my PhD, if and only if I believe that I will finish my PhD because I desire to finish my PhD, and I believe that my desire will motivate me to act in a way that I will finish my PhD. In short, my belief, is based on my desire, and I believe that my desire will impel me to act.

Intentional action also can be explained in terms of the belief-desire model. Audi's (1997) approach can be seen as an indirect approach to intentional action. It is indirect because he bases his argument not on the actions but on the analysis of the reasons for acting.

Reasons are fundamental to what has been called theories of mind, which refer to our capacity to infer what is on other people's mind (Apperly, Riggs, Simpson, Chiavarino, & Samson, 2006). This theory is essential for competent social interaction (Friedman & Leslie, 2004). "If we do not know for what reasons a person acts, we do not fully understand that person" (Audi, 1997, p.75).

Acting for reasons has a strong link with the notion of intention. "To know a primary reason why someone acted as he did is to know an intention with which the action was done" (Davidson, 1963, p.689). "The connection with reasons is the first and most widely accepted mark of intentional action, even if there is disagreement about how to spell it out" (Setiya, 2003, p.342). Let us see now how Audi spells it out.

For Audi (1997), reasons have different roles. They help to explain action to others and to ourselves. When we have a reason to act, we believe in something. The action

is a response to the reason. When we act, we have the sense that we are doing it because of a reason. There is a degree of control of the action.

In particular Audi defines an action for a reason in the following terms:

> S's A-ing is an action for a reason, r, at t, if and only of , at t, S A's, and there is a connecting relation, C, such that (1) S wants to r and believes C to hold between her A-ing and r, or believes something to the effect that C holds between her A-ing and r; (2) S's A-ing is a least in part explained by this motivating want and at least one connecting belief, and is guided by the belief(s); (3) S is noninferentially disposed, independently of seeking reasons she has had , or might have had, at or before t, for A-ing, to attribute her A-ing to the want and (explaining) belief(s); (4) S's A-ing is nonaccidentally produced by the want and (explaining) belief(s); and (5) the want and (explaining) belief(s) do not bring about (or sustain) S's A-ing via an alien intermediary. (Audi, 1997, p.98)

In simple terms Audi is suggesting the following: the way to connect an action and a reason is via wants and beliefs. So using wants and beliefs it is possible to explain and attribute the actions of a subject. Finally, the outcomes are really produced by the subject without appealing to luck or external alien intermediaries.

It is interesting to see here something very similar to Davis. The beliefs gave a kind of coherence to the action while the wants – desires have the mission of motivating. Finally, Audi makes us aware that although it can be said that an action for a reason is an intentional action, not every intentional action is an action for a reason. This will become important later in my argument because I also offer a partial explanation for intentional action in the context of interventions.

4.2.3.2 The Planning Approach

The planning approach emerges in part as a critique to approaches seeking to reduce intention to desires and beliefs. Bratman (1987) argues that we are basically planning creatures and that the complexity of the things that we have to confront is not adequately managed just by beliefs and desires. He argues that the traditional model "ignore[s] the central place of intention and action in our understanding of mind and intelligence" (Bratman, 1987, p.166).

For Bratman the idea is that, in general, mental states are embedded in a set of regularities. "These regularities connect these various states with each other, with

associated psychological processes and activities, and with characteristic 'inputs' and 'outputs': perception and action" (Bratman, 1987, p.9). These regularities form a web of relations. What intention is doing is helping us to adjust the coherence of all these elements.

Elements such as beliefs and desires can be part of the web and, consequently, they need to be adjusted in relation to other elements of the web. So beliefs and desires are not now central. What is central is the way to organise the entire web. Hence a distinctly mental state, a pro attitude toward plans arises as the defining characteristic of this approach.

Organizing my actions around plans helps to coordinate my activities. This demands an internal consistency of such plans. However, plans are rarely complete. They are partial, requiring constant adjustment. They are also embedded in larger plans hierarchically organized. I can have an intention to accomplish something complex as writing this thesis. Although this is a complex plan, writing the thesis is embedded in more complex plans such as completing my PhD and advancing my professional career. At a lower level writing the thesis involved sub plans for each chapter, for analysing the data, and even for writing this paragraph.

Our capacity is limited, we cannot possibly work out all the implications of all these plans and sub plans. My intentions help me to define standards and ways to approach action. They provide "framework reasons - whose role is to help to determine the relevance and admissibility of options" (Bratman, 1987, p.34).

These framework reasons are linked in chains of practical reasoning. Practical reasoning refers to the "process of modifying antecedent beliefs and intentions, perhaps adding some new ones, perhaps by deleting some of the original ones—normally by adding some and deleting others". "Practical reasoning is concerned with what to intend" and with the explanations of why the actor intent that (Harman, 1997, p.149).

Practical reasoning can be the base for familiar theoretical concepts such as logic, deduction, induction, explanations, but that does not mean that there is a formal way

to do practical reasoning. In deciding what to intend, beliefs, desires, plans, and intentions enter in the refining process that leads to our intentions and plans. Plans can be vague, but they can be modified and extended as suits the situation. In this view intention is a "whole evolving system" (Harman, 1997, p.163).

The role of practical reasoning is to achieve the coherence of the system. "One can increase coherence by adopting means to already existing ends – but that is not the only way. One can also increase coherence by adopting new ends, either because the adoption of those ends will help get one something previously wanted, or because adopting those ends gives a significance to things one has already done or plans to do" (Harman, 1997, p.177).

Now, van der Hoek et al. (2007, p.267) draw from Bratman to suggest the following implications for the planning approach to intentions:

1. Intentions pose problems for agents, who need to determine ways of achieving them.
2. Intentions provide a "filter" for adopting other intentions, which must not conflict.
3. Agents track the success of their intentions, and are inclined to try again if their attempts fail.
4. Agents believe their intentions are possible.
5. Agents do not believe they will not bring about their intentions.
6. Under certain circumstances, agents believe they will bring about their intentions.
7. Agents need not intend all the expected side effects of their intentions.

According, to Mele (1992, p.145), understanding that plans have a role in intention helps to explain that "Intention initiates and motivationally sustains intentional action; it guides and monitors behavior; it coordinates one's activities, including one's interaction with others; and it can both prompt and suitably terminate practical reasoning".

However, it is important to note that Mele has a difference from Bratman. When Bratman (1987, p.29) refers to plans, he assumes a "commitment to action: I have a plan to A only if it is true of me that I plan to A". In contrast, when Mele (1992) uses plans he uses them as the representational aspect of intentions. I can have in my hand a plan (set of instructions) to change a component of my computer. It does not follow that I am committed to carrying out the plan.

4.2.3.3 Courses of Action

Scheer (2004) starts questioning the long tradition of understanding intentions as mental states. As it was shown earlier, the belief-desire model and the planning approach, despite their differences, both consider intentions as mental states. For Scheer (2004, p.121), "an intention is not a distinct thing, e.g., not a mental state nor a combination of desires and beliefs nor anything else". Intention is regarded by Sheer as "a course of action which one has adopted".

Part of Sheer's argumentation is based on Wittgenstein:

> 'It was the intention that this should work as a brake.' Whose intention? Here intention as a state of mind entirely disappears from view (Wittgenstein, 2001, §48)
>
> 'For a moment I meant to ….' That is I had a particular feeling, an inner experience; and I remember it. – And now remember quite precisely! Then the 'inner experience' of intending seems to vanish again. Instead one remembers thoughts, feelings, movements, and also connexions with earlier situations.
> It is as if one had altered the adjustments of a microscope. One did not see before what is now in focus. (Wittgenstein, 2001, §645)

In line with these paragraphs, Scheer (2004, p.124) suggests that what is usually regarded as definitions of intention are better understood as "characterizations of the preparedness, the eagerness, or the determination or desire, to carry out an intention". Intention, more that a mental internal state, is a way to talk; it has pragmatic implications for action and coordination but nothing beyond this point (McHoul & Rapley, 2003). According, to this, Scheer does not think that the role of intentions is to motivate and sustain action or that they have some kind of causal power.

However, understanding intention as a course of action is still useful in matters of coordination and practical reasoning using Mele's (1992) language. Crucially Sheer argues, that intention as course of action is more appropriate to understand the continuity of intentions. Mental states come and go, and it is relatively easy to pin point when they start and finish. However, courses of action can be abandoned and retaken, can be interrupted, and, nevertheless, it is possible to talk about their persistence over time. An example of this situation includes, in Sheer's view our, intentions to pay the bills every month (Scheer, 2004). I do not have to think about paying my bills at every instant to be committed to this course of action.

Sheer also argues that his approach is better at explaining absent-minded people. If somebody is asked not to walk over the wet floor he can nod in agreement and make a mental note about his intention of not walking over the wet floor. However, later he can forget, so he will step on the wet floor. If he is asked if he intended to step on the wet floor, on remembering he will say no. "My belief is that this kind of context dependency is characteristic of intentions which the defender of the 'mental states' theory of intentions would have no way of explaining" (Scheer, 2004, p.129).

4.2.3.4 A Complex Adaptive System

Juarrero (1999) agrees with Scheer (2004) on both the idea of intention as a course of action and with the idea that there is a problem with the causal powers of intention. However, she does not deny the idea of a mental state. The problem for her is how cause has been understood in western thinking.

Her argument starts by describing how Aristotle explains causes. This approach involves denying the possibility of self cause and postulating four different kinds of cause to explain phenomena:

- Final: purpose.
- Formal: organization or 'shape' that makes possible a function.
- Material: the substance that constitutes and suffers change.
- Efficient: The source of change.

Next she explains how in the rise of western science the modern understanding of cause is reduced to mechanical causes. Accordingly, to Juarrero the modern understanding discredited most of the Aristotelian framework of cause and only two aspects remain: the rejection of self causes and the efficient cause now in terms of collision-like Newtonian causes.

Juarrero contends that if causes are understood in this way, there is no way in which they can control and guide an action. For example, under the Aristotelian framework is possible to have a purpose (final cause) that can guide the process. Without this

kind of help explanations of intentions fall into the trap of defining very complex sets of requirements in order to explain intentionality (just remember some of the definitions earlier in this chapter).

Juarrero's proposal is to conceptualise in a different way the causes in philosophy of action. To that aim, she uses information theory and complexity theory. Information theory let her conceptualise intention as a trajectory. "Thinking of actions as unbroken trajectories – calculated in terms of information flow, noise and equivocation – allow us to avoid many of the traditional objections to which causal theories of action are vulnerable" (Juarrero, 1999, p.5).

The idea is that thanks to information theory, actions can be conceptualised as an information flow from an origin to a destination. If there are problems in the trajectory (side effects, deviance, luck), those problems can be managed using concepts such as noise. The other problem is how meaning is fed into the trajectory. Information theory is not adequate because of the way in which the concept of information is managed. Here meaning is managed as bits in a computer, so it is not really meaning. Consequently, Juarrero turns to complexity theory.

Complexity leads us to reconsider how to understand causes. Traditional mechanical causes are called linear. In complexity and systems causes can be circular. In linear causes, causes and effects are separated. In circular causes the effects of a cause ultimately affect the cause itself. When a loop of causes is formed the complete loop that sustains itself emerges as a self cause.

In a chain of causes, it is important to differentiate between the first and second level contextual constraints. Constraints of the first level mean that after an action some options are open for the next action but not others. So what it comes in continuation is dependent on the previous history. Constrains of the second level appear when a loop is formed. When a loop is formed the whole system is constraining the workings of the chain. Meaning arises at this level. Second order constraints provide a context in which the actions are framed. This also makes possible control and guidance.

Based on this, “Intentional action should be conceptualized as a trajectory whereby emergent, second-order contextual constraints of dynamical brain organization selectively constrain lower-dimensional motor and speech processes” (Juarrero, 1999, p.192).

Now not only intentional action can be understood in these terms. Basically, the same idea extends to intention. In this case, the trajectories are extended beyond the body and make part of larger control loops.

> It is nonsense to claim that we end at the contours of our body, or that our individual concepts and intentions exist independently of our experience and surroundings. We have evolved the ability to construct antennae that both extend us into the world and internalize portions of that world. And we carry our history on our backs. In the light of our own past and in response to interactions with the world, we continuously restructure our internal dynamics. (Juarrero, 1999, p.212)

So our internal dynamics can affect my surroundings and my surroundings can affect my internal dynamics. Interacting with others can affect my intentions but my trajectories of actions can also affect others. I can affect my trajectories using my surroundings, for instance, a string around my finger can help to direct my actions to a previously committed course of action. Juarrero also suggests that the way in which we human beings can make sense of that is through stories of our action. At the end, understanding human agency is an interpretative process.

It is important to note that those are important differences between Sheer and Juarrero. Notice, for example, that the courses of action in Sheer are ‘adopted’ that seems to mean prefigured. In contrast course of action in Juarrero is emergent, so they are “continuously restructure”.

The other important difference is that for Juarrero intentions have causal powers despite the fact that they can be thought of in part as mental states.

4.3 Intentions in Language and Intentions in Philosophy of Action: How can they fit together?

Garfinkel remarks that is usual to find different theories claiming to explain the same objects. However, their relationships are far from clear.

> They [theories] seem to be different *sorts* of things. Some of the theories may address different phenomena or different realms of phenomena. Some are genuinely competing, others can be reconciled with one another, while still others pass one another by, answering different questions. They fit together only in a very complicated and overlapping geometry. (Garfinkel, 1981, p.1)

In Garfinkel's terms, Relevance Theory and Philosophy of Action are two "sort of things" concerned on intentions. This section proposes an approximation to their "overlapping geometry".

In order to discuss the relationship, I will explore two questions: First, can communicative intentions be understood as one of the faces of intentions proposed by Bratman (1984)? Second, it has been suggested by Philosophy of Action that intentions fulfil some roles in human action. Which of these roles can be fulfilled by communicative intentions?

4.3.1 Communicative Intentions as Intentional Action

As has been already mentioned on this chapter, intention is a two-faced phenomenon (Bratman, 1984). These two faces are commonly known as intentional action and intention. Based on this distinction, I propose to conceptualise communicative intentions as a subset of intentional actions.

The initial premise of my argument uses the notion of language games. As was already mentioned, according to Wittgenstein (2001) in a language game, language and actions are weaved. To use language is to act. Now, the process of conveying a communicative intention involves actors producing stimulus by speaking up or by making gestures. Therefore, communicative intentions necessarily require action.

Having argued the action component, let us deal with the intentional component. This argument runs parallel to one in philosophy of action, comparing acting for a reason with intentional action. According to Audi (1997, p.105) "acting for a reason constitutes at least a partial account of intentional action". The account is partial because although acting for a reason can be seen as an intentional action, not every intentional action is done for a reason. Even so, "certainly intentional actions that are not intrinsically motivated, that is, are performed in order to realise a further end, are actions for a reason" (Audi, 1997, p.102).

On Relevance Theory's side, a communicative intention will be carried out in order to realise a further end. This end accordingly to the theory is informing about our informative intention. The possibility to convey the intention is based on our abilities for inferential communication, possibility that hints to additional ends: conveying more information than the one possible through a code and modifying and expanding mutual cognitive environments. Consequently, and just like reasons, communicative intentions can be seen as well as means to realise further ends.

Additionally, Audi (1997) explains that the realization of a further end requires connecting reasons one to each other in a process of reasoning. "Reasoning is a process of modifying antecedent beliefs and intentions, perhaps by adding some new ones, perhaps by deleting some of the original ones— normally by adding some and deleting others" (Harman, 1997, p.149).

This process resonates with the inferential process of communication proposed by Sperber and Wilson (1995). Communications from this perspective aim to modify and extend mutual cognitive environments. They accomplish this by modifying the strength of assumptions and introducing new ones in a process that mirrors the process of reasoning.

Hence, at the core of acting for a reason and communicating communicative intentions, there are similar processes and both are steps for further ends. Combining this with the idea that communicating is acting gives me enough confidence to think that there is a strong link between acting for a reason and communicative intentions. Therefore, just as in the case of acting for a reason, communicative intentions can also

be conceived as a subset of intentional action. Not every intentional action is a communicative intention, but every communicative intention is an intentional action.

4.3.2 Roles for Communicative Intentions from the Point of View of Philosophy of Action

This chapter shows how authors such as Baldwin and Baird (2001), Enç (2003), and Mele (1992) suggest that intentions are important for a number of reasons. They enable us to make sense, explain and rationalize our actions and those of others. They are fundamental in helping to coordinate the interactions between groups of agents. They can cause, sustain and guide action. The question is how communicative intentions match against these roles.

Relevance theory really does not go in depth to explore what is intention. It is more concerned about how these intentions are communicated and their effects. Still, it shows how intentions have a role in communication and inter-subjective understanding. As a consequence this approach to intention is useful to explain how we make sense, explain, and rationalize our actions and those of others. It is also useful to explain how interactions can be coordinated through the expansion and changes of their mutual cognitive environment.

However, because the focus of relevance is on communication and interaction it does not explain how intentions can cause, sustain, and guide an actor's action. Therefore, to foster a way in which philosophy of action can complement the already defined framework, it will be necessary to find a way to cover these three aspects.

4.4 Conclusions

This chapter presented the philosophical/theoretical approaches to the understanding of the concept of intention. The chapter shows five approaches to intention. One of them relies on language pragmatics. The other four come from Philosophy of Action. This confronts us the problem of multiple explanations competing for a problem (Garfinkel, 1981).

The proposed way out of this problem is to use Bratman's (1984) idea of intention as a dual-face phenomenon. On one side, there is the present-directed intentional action. On the other side, there is the future-directed intention.

It is argued then that intentional action can be understood by being approached through the communicative intentions in Relevance Theory. Because this approach is based on inferential communication, it is useful to deal with roles of intention such as explaining, rationalizing and making sense of our actions and those of others. It can also help to understand the coordination of the interactions between agents.

However, it is also argued that this approach is not covering the roles of guiding, producing and sustaining action. These are associated with intention, the future-directed face. Yet, from the remaining four Philosophy of Action approaches none is selected. The idea is that they will serve as a pool of alternatives to contrast against the experiences in the field.

The approaches provided here are developed in Chapters Six (present-directed intentions) and Seven (future-directed intention). The next chapter shows the process of learning on intention in the field, the empirical part of the research. Part of this work involved using the ideas in this chapter.

PART TWO: EMPIRICAL WORK

Chapter 5 Overview of the Empirical Work

> One learns the game by watching how others play. But we say that it is played according to such-and-such rules because an observer can read these rules off from the practice of the game. (Wittgenstein, 2001, §54)
>
> to build dense, well developed, integrated, and comprehensive theory, a researcher should make use of any and every method at his or her disposal, keeping in mind that a true interplay of methods is necessary. (Strauss & Corbin, 1998, p.33)

So far, this text has been laying conceptual foundations for researching intention. These foundations encompass the disciplinary MS/ST (Chapter Two), the methodological drawing, mainly from Action Research (Chapter Three) and the philosophical/theoretical relying on ideas of Relevance Theory and Philosophy of Action (Chapter Four).

This chapter now presents an overview of the empirical exploration. It is the essential juncture between the theoretical and the discussion of the findings in later chapters of the thesis. It shows the research process carried out in the field (see Figure 1.1) to learn the game in Wittgenstein terms. However, here the learning was not limited to watching how others were playing the game. It also implied involving me with the game of intervening, and trying to read off the rules from all the research activities that I witnessed, or that I conducted.

This chapter deals with a lot of detailed descriptions of the work. The purpose of it is dual. First, the detail appears as proof of the rigour, quality and reflection behind the work on this research. Second, it helps to show the micro-reflections contrasting different angles, and the co-construction with my participants in the process of striving for an ethical practice. In essence, this chapter shows what was actually done on the field in contrast with Chapter Three where the methodology was a plan before engagement.

The chapter starts by presenting background information about the group, and the project that I was following for the empirical part of research. It is aimed to provide the context of the case to the reader. Afterwards, it gives a general background of my research process, and the relationship that I established with my participants. Next it

focuses more in detail on some of the research methods and its use in the field, interviews and the intervention component. The last content section deals with aspects about transcription and analysis of the data and how the themes to develop in later chapters of this text were defined after the actual involvement on the field was done. The chapter ends with some reflections and implications for later chapters.

5.1 Background Information on the Case Study Site

This section is divided in two descriptive accounts. The first introduces the Team Of Practitioners (TOP) along with its origin and the context in which they were operating. The second part focuses on the Project For Analysis (PFA), the project in which my research focused. It shows its objectives, case studies involved as well as the way in which TOP organised for working on it.

5.1.1 Case Context

To get a sense of TOP activities is important first to describe some elements about their context. TOP is a team of researchers working for a Crown Research Institute (CRI) in New Zealand. The CRIs are owned by the New Zealand government. They were created in the early 1990s from research bodies that existed inside government departments and ministries. Studies at the time showed that the level of investment in research in New Zealand was poor. The plan to improve this situation involved reorganising the whole sector.

With that aim, the governmental research systems in New Zealand were organised in three components:

> * The Ministry of Research, Science and Technology (MoRST) that provides science policy advice.
> * The Foundation for Research, Science and Technology (FRST) that is primarily responsible for funding science outputs.
> * The Crown Research Institutes (CRIs) that perform actual scientific research.
>
> *(Crown Ownership Monitoring Unit n.d.)*

Ten CRIs were created from different branches of the government: Department of Scientific and Industrial Research (DSIR), the Ministry of Agriculture and Fisheries (MAF), Ministry of Forestry, Ministry of Transport and the Ministry of Health. One

of them, devoted to social science, was not viable and subsequently, closed. The other nine had developed a market focus and had proven profitable. This fact is ironic because both TOP and PFA, on which my study is focused, were conceived as ways to revitalize the idea of New Zealand's viable social science.

Although not in its own right, social science in the CRI where I conducted my research continued to have a role. It was seen as a component of more scientific and technical projects. Mainly, the role for social research in these projects was social marketing. The hard science was achieving the concrete outcomes and the role for social research was to find a way to communicate and assure the appropriation of the outcomes by the community. Consequently, the projects and research groups have some social researchers to support their activity.

TOP and the PFA's history can be traced back to 2003. At this point in time, two research groups from the CRI were bidding to FRST for two research projects. These projects were based on biophysical sciences in relation to environmental matters in water management. Their main objectives were directed toward contributions to their specific sciences. However, both had subordinate objectives of a social nature.

Having social objectives in relation to the environment originates in big extent from the Resource Management Act (RMA) and from government efforts to get the involvement of Māori communities in decision making. The RMA is the "main piece of environmental legislation and provides a framework for managing the effects of activities on the environment" (Ministry for the Environment, 2006, p.24). This framework points out the importance of sustainability and community participation when deciding how to manage environmental issues.

Regarding Māori people in New Zealand, it is important to note that this is a country founded on a bicultural treaty, the 1840 Treaty of Waitangi. In it the Māori indigenous people of New Zealand became part of the British Empire but keeping their rights to land and water. However, Māori claim that the treaty was not respected. This led to big protests on the 1970s and eventually to negotiated settlements for the breaches of the treaty.

Because of their right to land and water and because the current importance of the Treaty in New Zealand, Māori consultation is an important element when considering communities. This entails cultural difficulties. For instance, from a western perspective, rights over land are linked to ownership. From a Māori culture perspective the rights need to be seen in consideration to whakapapa, the genealogic principle that links people to ancestry and places. From this point of view land makes part of ancestry; for a Māori, land is part of the family. Consequently, the Māori world view includes the possibility of having a stake in a situation regardless of ownership.

The RMA and Māori consultation are factors that set in some way the next step for this story, FRST's entrance to the scene. After FRST received the bidding for the two mentioned projects they made a counter proposal to the CRI. They suggested the creation of a third research project incorporating the social research objectives from the other two. The idea was to have a social research project on its own right.

The CRI took this opportunity to assemble not only a project (PFA) but a team of researchers (TOP) incorporating people from inside and outside of the organisation. All of them despite the dissimilar backgrounds were experienced in social research. The insiders came from the bidding groups of water and bio-solids with an unbalanced composition. Three people belonged to water: Frederick Jones (background in industrial engineering, systems thinking, and computer simulation), Wanda Allen (nursing and sociology) and Hannah Morgan (Education, Te Reo Māori, bicultural research).

Barbara Jenkins (sociology, political science in education, New Zealand history) belonged to bio-solids. Mark Gould (psychology, systems thinking) and Grace Watson (systems science, management), two outsiders, were specifically hired for TOP social science group. Gillian Jackson (chemistry, water science) was officially part of the PFA, but her involvement on this project was superficial and it was not directly allocated to any specific part of the project.

Three more people were the last to join the group. Dianne Adams (psychology, Māori research, and health) was hired a pair of months before my first contact with the group

in 2005. William Donovan (geology, operation research) was hired a month afterwards. Laura Miller (geography, environmental policy) was hired at the begging of 2006, coinciding with my arrival in the research setting.

Dianne was involved directly with the PFA. William was involved with the PFA at the beginning but his role diminished with time and he was moved to different projects. At Laura's arrival TOP was managing different projects and she was not involved with the PFA, but the possibility of her participation in PFA was always open. Although some of the people mentioned here did not have a big involvement with the project, all of them accepted to be participants in my research and our conversations also influenced my ideas.

From my point of view, the more promising people to understand how they were managing methodologies were Frederick, Mark, Grace and William. They, in one way or another, studied and applied different methodologies. It does not matter here if they were calling them systems thinking, management science or operational research. They were nearer to my own way of making sense of interventions.

The next section describes part of the history and structure of the PFA before my arrival in the setting.

5.1.2 Project PFA Overview

During my involvement with TOP, they were carrying out many projects at once. However, as I already explained my research was bound to the PFA. At my arrival, the project was already in its third year. I am not pretending here to give a complete account of the happenings in those three years. My purpose is to give a sense of what the project implied and the roles of the different actors in the project.

The last section described how FRST asked the CRI to create a research project out of some biophysical science projects in water and bio-solids. The original projects were focused on improving scientific knowledge and giving this knowledge to communities to help them reach better informed decisions. As science projects they focused on studying samples of water and bio-solids. Social science was there to deliver the

outcomes and implications of the analysis to the communities. They were acting on the assumption of being experts and giving the expert view to the communities. The new project was based on the assumption that knowledge needs to be created with the communities for the communities, an aim in line with Action Research ideas.

Three case studies were chosen. They involved different communities across the country. Two of them were “water” projects, the other a “bio-solids” project. All of them were aiming to involve communities around their respective issues.

The first case study was concerned with water allocation. A local council was studying the feasibility of building a dam in their area. The work carried out by TOP was supporting this effort from a sustainability perspective. The communities were sharing the same sources of water for a variety of uses such as industrial, agricultural, drinking and for recreational purposes. In the process, they were stressing their water resources. TOP's aims were first to explore the different values held by the community around the water uses in the area. The second aim was to see how these values were related to different strategies for managing the resource. I will refer to this case as Values in Water Management (VWM).

The second case was involving a regional council. One of the programmes of this council encourages different community groups to take care of the water resources such as rivers and streams in their local areas. The regional council in question was wondering about the achievements of the programme and was looking for a way to evaluate it. TOP proposed to work with some of the groups affiliated to the programme and help them to develop ways to assess themselves. I will refer to this project as Groups for Water Caring (GWC). This case is especially important for my research because it was the only one at hand in the setting.

The third case, the bio-solids case study involved again a local council. Bio-solids are an end-product of sewage treatment (the other is relatively clean water). Once they are obtained, the options are using them or throw them away. The purpose of the project was to explore the community's perspectives around the use of these bio-solids. The project was in line with guidelines produced by the Ministry for the Environment (MfE) in 2002 to reach 95 percent of bio-solids use in New Zealand by 2007.

The topic can be a very sensible one because it can be thought of as the use of human waste for agricultural purposes, hence the need to construct approaches to the issue with the community. I will refer to this one as Bio-solids.

After this brief look at the different case studies one difficulty seems apparent. All of them are different enough to make difficult the idea of a coherent research project. This situation was stressed by the previous "allegiance" of the case studies to their previous biophysical projects. The team approached the problem defining new objectives detached from the case studies, and using the case studies as data for these consolidated objectives.

Two objectives were defined. The first focused on how to improve dialogue between the different actors and sectors involved in the decision-making process. This involved understanding the institutional infrastructure and the modes of dialogue between land users, policy makers, scientists, and communities. The second focused on the methods and tools that were going to be used or designed for enabling participation in decision making in the case studies. The purpose was to evaluate how well they were suited for enabling the participation.

The research project was then organised around three case studies and two research objectives. There were three case study leaders and two objectives leaders. A team was assembled to manage each case study. The objective leaders were interacting with these teams to monitor and guide the compliance with the general objectives of the research. Finally there was general leader of the project. At the time of my arrival in the setting (February 2006) the leadership roles were as shown in Figure 5.1. It is important to note that in this arrangement even the leaders were part of the pool of resources available to the others.

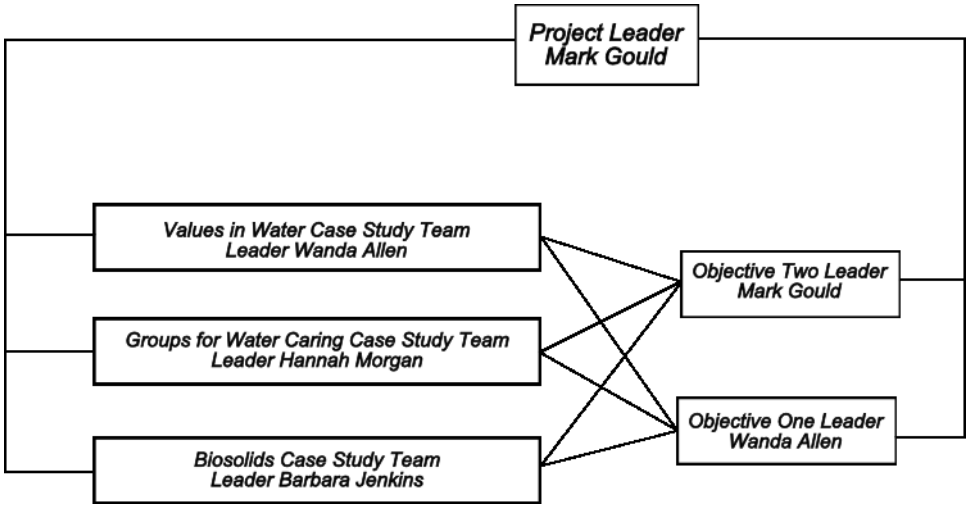


Figure 5.1. Project Organisation.

The aim with the structure was to have everybody working towards the objectives of the programme while having some people devoted to specific projects. However, conditional to the phase or the amount of work in the case studies, other people could be called in support of some activities. This was necessary considering that the work in the case studies experienced peaks of activity.

At the CRI, they were organising the amount of work of the project by percentages of time devoted to the project. The range of percentages devoted to the project in the group varied from as low as 5 percent up to 30 percent of the time. Instead of taking 5% of work each week for the project, the custom was to employ the percentage on the activity peaks. The valleys of activity referred to activities such as building relationships (usually at the beginning of the case study) and following up the setting after the interventions. The peaks of activity carried out activities such as preparing and executing the workshops.

One activity that can be seen also as a peak of activity was reporting to an Advisory group. This group was a resource for the PFA. The group was composed by people of relevant sectors to the PFA but were outsiders to the CRI. Their role was to give TOP "guidance about how research can be useful" (Mark, session #1.3). This implied learning from the Advisory experiences in the New Zealand context, getting help to develop contacts to spread or "export" the findings of the research and in overall getting help to make the research relevant to New Zealand context.

TOP was meeting the Advisory group every six months. In those meetings, they were presenting advances on the research and receiving feedback about the work. This usually involved planning the session, designing presentations, rehearsing such presentations, and preparing different documents for Advisory information and revision.

5.2 Research Activities

After giving some general background about the project, now I will proceed to give a general background on the work that I performed on the field. The process of research comprised many concurrent activities. The Table 5.1 presents an overview of the process facilitating its visualization. There are two axes. One refers to the actual months of 2006 in which I was in the field gathering the data. The second axis shows the different activities that I was carrying out in the setting (from diary up to interviews). It provides a complementary view of the fieldwork shown on figure 1.1.

The representation of when a particular research activity was used through time uses different conventions. There are methods continually in use such as Diary, Readings (Pragmatics and Philosophy of Action), and working with the Network Files / documents concerning the project. A line's thickness represents the emphasis given to the activity at a certain point. An additional convention is the rectangle half empty-half full on organising the network files. In this case, the empty half shows a period of time in which I was organising files to clarify my understanding of the PFA. In the full half, I continued the process aiming to help TOP to improve on the organization of their data.

There is another set of methods applied in a discrete way through time. They deal with discontinuous and easily pinpointed events such as the feedback sessions. In the case of the meetings two conventions of points are use to mark the difference between the meetings, clear for the PFA and dark for the GWC. In the case of the interviews, ovals are grouping interviews with similar purposes. The first group points out the interviews with the whole team. The second group shows interviews just with the people involved directly with the GWC case study. A complete enumeration of the

feedback sessions, interviews and meeting in which I was allowed to take notes and audio recordings is presented in Appendix 6.

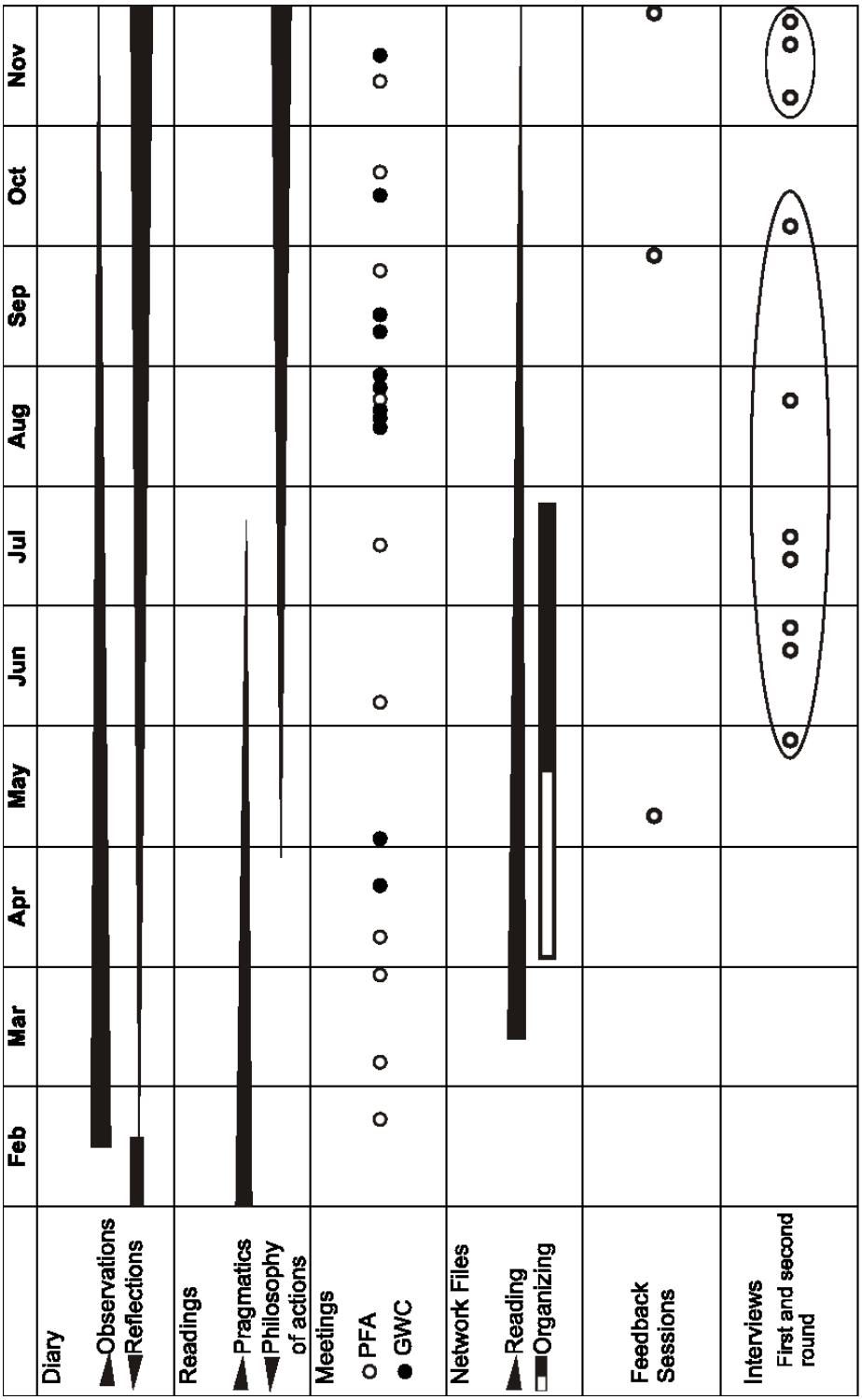


Table 5.1. Overview of the Activities on the Field.

Let us now comment in more detail the elements listed on the rows of the table.

Diary: I started it before arriving at the setting. At that time, it focused on the methods to be used, ways to be ethical, and speculations about what could I do once in the field. After my arrival, these reflections stopped. They were replaced by my observations of what people were doing in the field. I was writing down things that people were saying, their behaviour, and general details that I felt were potentially clarifying for the understanding of the setting. The number of annotations on observations decreased with time, perhaps as the result of being more familiar with the context.

While observations decreased, reflections started to regain importance. Now the emphasis of these reflections was on seeing how the overall fieldwork (and its activities) could fit with the theoretical reflections. At the end, most of my reflections were seeking to make sense of Philosophy of Action in the light of the empirical data.

Overall my diary encompassed empirical (observations about me and others), methodological, theoretical and philosophical entries. With the diary, I aimed to leave a trail of the whole process as Bloor (2006) proposes.

I also produced separate files with reflections to prepare my interviews and feedback sessions. All of them were fundamental because I was tracing my intentions regarding my intervention opportunities.

Readings: Before arriving at the setting, I was clear on the use of language philosophy and pragmatics for my research. However, once in the field I realized that it was a limited way to understand intention. By serendipity I discovered Philosophy of Action (walking around the library shelves). Consequently, my readings on pragmatics diminished while my readings on Philosophy of Action increased. This later field of knowledge was so vast that my reading of it continued after I left the field.

The meetings: I attended all the available meetings for me. They comprise work on the PFA and one of its case studies, the GWC. The work on the other two case

studies was already done (VWM) or in a different city (Bio-solids). It is important to note that most of the PFA was dedicated to report. This situation made me very nervous about how relevant could be the case for my research. The situation improved once the GWC case study took momentum in August.

Network files: During the first months of my fieldwork, it was very difficult for me to understand what people were talking about. One of my strategies was to read past documents of the project in the shared files allocated at the CRI computer network. This helped me to improve my understanding of the situation. Additionally, I used to search on the system for new documents or modifications of the existing ones. This made me aware of the development of the project, meetings, problems, plans that in many occasions were not mentioned to me. Once I started to feel more part of the team, and, consequently, I gained more access, the need for this "monitoring" diminished.

The files included agendas for the meetings, minutes of the meetings, plans, reports for FRST, reports for the CRI higher management, reports for the stakeholders in the case studies, reflections on the case studies, annotations on those reflections, power point presentations, combinations of these materials for workshop preparation and conference papers.

The other work that I carried out in relation to the network files was to propose to TOP ways to improve its organisation. In part I decided to tackle this problem because I wanted to be useful in return for them allowing me to do my research in their space. Furthermore, it was a way to gain more access. It is important to note that thinking about this organization was an activity that I was already carrying out for the benefit of the research.

Feedback: I performed three. The first one was not related to intention, but it served as material to reflect on intention later. The second one was inspired by my readings on pragmatics and corresponds in a big degree with the developments explained in Chapter Six. The third one was based on my readings on Philosophy of Action, and it was the base for the work in Chapter Seven, although my understanding of this topic changed greatly between my feedback and later reflections after I left the field.

Interviews: I started my interviews after gaining confidence from the first feedback. The first group of interviews was intended to get a general knowledge of the people and the work that they were carrying out. The second was focused on the problem of understanding intention from the perspective of Philosophy of Action.

5.3 Relationship with the Participants

As was presented before, my research methodology was drawing from Action Research. Consequently, an important component of the validity in such a methodology is the relationship between the group and the researcher. Here I characterize this relationship in two parts. In the first one I show how we were supporting and learning from each other. In the second part I show how I went from observer to participant.

5.3.1 Mutual Learning

Since my first contact with TOP, I started to develop some empathy for the kind of questions that they were confronting. In some way I saw the reflection of my concerns. Their vocabulary tended to emphasize the idea of method while I focused on methodology, but the questions and problems could be applied to either case. One of their main research questions focused on "Evaluating Methods and Tools for Participative and Systemic Decision-making" (TOP internal document, 2007). In relation to this question, they frequently discussed topics such as how to evaluate, how people use methods, how to know if the participants made a shift, the possibility of neutral facilitation or how the identity of the facilitator was having an effect on the dynamics.

For instance, in this comment from session #13, Mark is explaining an element to be considered for evaluating the methods in objective two of the PFA:

> we want to look whether the methods that we are testing achieve their intended purposes…but also whether they if they are perceived as useful by other participants and users regardless whether they achieve their intended purposes…that is important because something may not do exactly what is intended, but it has some useful byproduct…Its method and facilitation

> because you have to be able to tease apart to the extent to which is the method or the extent to which is the way that you apply that method that makes the difference.

These concerns are basically the same as mine, except that I am talking about the overall process of intervention. Gillian in informal conversations also explained me her way of conceiving facilitation. She draws extensively from her experience as a coach in different sports. Consequently, she was using the metaphor of the training, preparation and the match to decide strategies when planning workshops. That always resonated with my idea of using language games to understand the use of methodologies.

The resonance of the questions was not the only point drawing me to them. They were researchers and, consequently, I found many discussions that for me were almost a parallel PhD. They discussed among other topics about methods, management of the group, presentation of research proposals, the future direction of the group, leadership, and interaction with the communities. Because my future aims at the end of the PhD include having a research group back in Colombia, I found it all quite useful and interesting.

Additionally, in some way they were supervising and teaching me about how to improve my fieldwork. Frederick used to give me advice about the stages of the research. Hannah suggested the need to involve different aspects and people in the research. Wanda talked with me a lot and was critical of my paradigm (systems). Mark was a support regarding systems thinking.

Grace and Dianne were concerned about ethics. For instance, at the beginning I just assumed that if the meeting was starting, due to our previous arrangement, it was acceptable to start to record. However, Grace in session #2 advised me that "Normally if you are going to record somebody it will be good if you could just check with the people if it is ok". I was very careful the rest of my involvement to ask permission before recording. It is just normal politeness to do so, but I think now that it is an important ethical demand.

In the same line of ethics, Dianne was always questioning me about the boundaries of my observation. She saw my observation as problematic because there were no clear boundaries for it. TOP's office interactions included discussions about other projects and sometimes even personal matters. However, on many of those occasions I was present, and they did not have clarity about my role or the boundary of observation there. Eventually, I dropped the observations on the office space.

The relationship was both ways. Since my arrival, I also looked forward to making a contribution to the team. It was a way to thank the team for their support for my research, and also a way to show that I was not a handicap. My contribution was presented mainly through the feedbacks, as it will be explained later in this chapter.

Additionally to my feedback I helped devising a structure of folders to organise their files on the network, I taught the basics of the software Endnote, and proposed the use of Wikis (as in Wikipedia) for documenting the research. Finally, the idea of organising some files using hyperlinks that I was using with the data of my research was mimicked. These were not big contributions but represented my struggle to find ways to engage and contribute with TOP's work.

On the other side, I felt interest in my research from TOP's side. They encouraged me, and helped me with some papers that I presented in conferences while I was there and even afterwards. They also supported me checking the drafts of my thesis, helping me to gain confidence on the ideas presented. This works as an important way to improve the validity of my work.

5.3.2 From Observer to Participant

Arriving at the setting was not easy. I was an outsider person studying the problem of intention in an empirical case. Two caveats come to mind. Firstly, this problem was mine, this research problem was not TOP's concern. From this point of view, the research situation can be characterised as a research "on" people (Herr & Anderson, 2005, p.40). Secondly, studying intention is a sensitive issue. It was at best disturbing for the team.

To further complicate my situation, part of my agreement with TOP was not to interrupt their work with my questions. Therefore, while any other member of the team could clarify on the run ideas, data or concepts with their co-workers, this possibility was not open to me. Consequently, my progress at the beginning was really slow. I was having problems to grasp the extent of the project, its parts, the way in which they were working, and it was difficult for me to differentiate when TOP was referring to the PFA. On many occasions, I took notes of what people were mentioning just to get a warning that the issue just mentioned was outside of my research space. This was emphasising my condition of an outsider (Herr & Anderson, 2005).

As an outsider I was pushed to find alternative ways to approach my work. Therefore, I turned to examine the Folders Files on the Network. These files were rich in information such as: research agreements with the funding bodies, log of all the activities carried out by the group, general plans of the research program, and plans for the workshops, surveys, interviews transcriptions, papers, data analysis, reflections, presentations, and reports. All this information was very useful to improve my understanding of the setting.

Besides, thanks to these files, on some occasions I found out about meetings to which I was not invited (I was not on their minds when they set the agenda). Under the circumstances, I used the information to inquire about those meetings and make people aware of the needs of my research and get invited. Hence, I also started to use the information to keep track of the developments of the project.

Slowly, I started to be more comfortable with my understanding of the meetings. It was not only the fact of attending a good number of them, but also the readings on documents produced by TOP as well as information about New Zealand and my observations of some of the interactions in the office space. Crucially for my research I perceived a team able to discuss very openly difficult issues about their work, world views, and relationships. This facilitated my work because I was not concerned with deception behind their intentions. On these grounds, I gained confidence for my first feedback in May.

As was stipulated in our agreement, my feedback was delivered in a reflective practice meeting. There were many topics on the agenda. They were prepared for a whole-day meeting. One of the topics was my feedback. I asked for 40 minutes, the amount of time that was approved without difficulty. My time slice was allocated at the beginning of the day. Because this was not a meeting concerning the PFA, the contents of the meeting (except my feedback) were outside of my research boundaries. In fact, it was decided at the start of the meeting that I would not be allowed to stay after my feedback.

Although I always tried to be clear that this was not the case, some people were concerned about my analysing their intentions from a psychological point of view. I emphasised that my background could not possibly allow me to do this kind of exploration. I explained how I was planning to understand intention through linguistics. At the end, the group "enjoyed" my feedback (session #16). They considered it useful and not threatening. All this allowed me to get permission to stay for the rest of the meeting. This was my first tangible advance in the process of leaving the outsider observer status. Afterwards it was easier for me to ask questions (out of the meetings), and I felt a little more comfortable in office situations.

A very important situation in relation to our relationship developed after the first feedback. The reflective practice meetings disappeared. It seems that people did not have the time to pursue this activity. Without these meetings, my space for feedback was also gone. I knew of the importance of having that space for the Action Research part of my methodology. However, due to the good result of my first feedback, and my own confusion about how to manage the concept of intention and consequently what to do next, I felt safer not pushing for a second feedback.

Curiously, this situation mixed with the ambivalence of TOP about the way of my participation in their meetings for the GWC. Part of the team wanted me to have a more direct involvement with the case study. However, I also felt that part of the team opposed the idea. Consequently, my behaviour on the GWC became a function of the people present. Accordingly, I contributed or not to the group. This was a constant source of anxiety for me.

In session #38, without any plan from my part I suddenly found myself manifesting the tension that I was experiencing with the GWC meetings. In turn they manifested that they did not know what I was doing, therefore, the situation for them was also uncomfortable. In fact, they also expressed how they felt at my arrival to the field. Some felt that my research was imposed on them and complained about the lack of clear boundaries of my work. However, they did not blame me for it. (The context of this case is expanded in Section 7.1.3).

After mutually clarifying situations and feelings, the group agreed to allow me more direct participation, and I agreed on giving feedback in any kind of space possible for the group. Here I also felt an important space for getting the group's acceptance. After my second feedback in session #41, the research was not so much "on" them, but now it was frequently "with" them (Herr & Anderson, 2005).

I was helping them with their own problems, but on the other hand, they were also helping me more directly with my research problem. There was more trust. Now, they were seeing how my research could relate with their own situations. Consequently, they were giving me useful feedback to improve the ideas. They were also participating in the elaboration of ideas on my research. The boundaries of the research setting shifted in relation to my stance as a researcher (Section 3.4).

5.4 Interviews

I decided to conduct the interviews in a very open way. I was trying to "provide an environment conducive to the production of the range and complexity of meanings that address relevant issues, and not be confined by predetermined agendas" (Gubrium & Holstein, 2003, p.75). Therefore, in a similar way to my feedback I was looking at how to " activate the respondent's stock of knowledge…and bring it to bear on the discussion at hand in ways that are appropriate to the research agenda" (Gubrium & Holstein, 2003, p.75).

Moreover, I was not trying to stay detached from my interlocutor on the interview. After all, "Interactive interviews offer opportunities for self-conscious reflection by researchers as well as respondents. Some interviewers now discuss how they feel

during interviews… and how they use their feelings, experiences, and self-analysis to understand and interpret the experiences of others" (Ellis & Berger, 2003, p.160). This was mirroring some of the behaviours in TOP meetings. I was also trying to be aware of my feelings there. My behaviour was relaxed and I did not find it inconvenient to laugh if something funny was said, although in the meetings I tried to conceal my bad feelings about something, and of course I was not allowed to talk.

I always planned interviews, and wrote on paper the topics and questions. The paper was always presented from the onset to the other person (Farías & Montero, 2005). I was checking with them the development of the interview based on the points presented. If they asked my views, I gave them. However, I avoided taking sides on problematic issues that I felt had the potential to fuel conflict among them. I always started by explaining the purpose of the interview, and I always asked at the end if they thought that something was missing from the points covered. Usually this produced other 15–20 minutes of extra time, where people often talked about their specific interest.

In my first round of interviews (Appendix 3), I decided not to be too technical on the issues. I asked people mainly about their "cognitive environment", their studies, skills, aptitudes, ethics, aesthetics in relation to intervention and methodologies. Additionally, I was inquiring on their views about the purposes and plans in relation to the project PFA.

From my researcher's perspective, the second round of interviews (Appendix 4) was much more complex. The difficulty was that the interview ranged from trying to understand intentions as something clearly conscious up to something emergent but not necessarily conscious. Consequently, I was moving forward and backwards asking on the different meetings on the subproject. In each one I was looking out for the effect of different concepts on philosophy of action, but also trying to understand together with my interviewee whether the intention emerged at some point of the process.

Because of my Philosophy of Language background I assumed that my interviews were a way of intervening. From my point of view they were useful to make people

reflect about their work. I discovered later in the interviews that Wanda and Frederick in TOP also conceived interviews useful as intervention tools. They saw them as a tool for generating rapport and a way to encourage participation.

5.5 Intervention

A fundamental part of my research was my intervention component. It is fundamental because I used first and second person Action Research in order to reflect on my intention and other's people intentions. Typically, because I am aiming to contribute to MS/ST, it will be expected to use some systems thinking methodology and use it in turn to reflect about my intentions on it. However, I encountered difficulties using the system's ideas in the field. Consequently, I had to turn elsewhere to think about feedback.

What follows is an explanation of the difficulties that I found, why I turned to language games and how, from this perspective, I could draw guidelines. Finally, I present an overview of what were the content and my purposes with each of the three feedback sessions delivered to TOP.

5.5.1 Difficulties Using Systems Ideas for Intervention

Before my first feedback, I became aware of some differences inside the group that affected greatly my way to intervene. These differences were in some way interrelated and rooted in the history of the group. As it was already mentioned, before TOP came into existence there were different scientific projects with social objectives. Therefore, at this CRI social science work was already in place. Then Grace and Mark, non New Zealanders, with a strong background in systems thinking were brought in to strengthen the programme. Mark was given the leadership of the new project PFA and the old social sciences' objectives became part of the new project.

There were some strong reactions. Someone in the group referred to this as a "take over". Somebody else manifested that s/he did not want to be "brainwashed" by systems thinking, someone else stated that systems was too dominant. I was first

exposed to these comments and differences at the time of my first contact with TOP back in 2005. Mark argued against this. His argument was that he pushed in the latest group enrolment for Dianne, a person not in systems thinking. Actually, Dianne was a Māori researcher and that represented the aim for having a diversity of disciplines in the group. However, I witnessed how the tension systems vs. other disciplines subsisted at least as long as my involvement until December 2006.

In my opinion, one of the symptoms of this tension was the avoidance of systems methodologies for guiding the work of the group. On one side, they were using methods and methodologies, although not necessarily from the systems thinking paradigm, when engaging the target communities of their research. On the other side, they did not use methodologies or methods or techniques to clarify their own courses of action. Before my first feedback, the idea of using methods was proposed sometimes but there was never real support to the initiative.

The time to give my first feedback arrived after two months of having started the fieldwork. By that time, I already had 15 recordings. I read intensively about the project, and I familiarised myself with the setting. However, there were many things that I did not understand, and I did not have the time to think about intention. In fact, I only cared about "surviving" and not embarrassing myself at the session (just as Frederick used to say). The question was: how to do it?

5.5.2 Turning to Language Games

Before starting my fieldwork, I considered the possibility of using some methodologies for my feedback sessions. However, using systems thinking and methodologies was risky considering the audience. On one side as I already explained there were a group of people looking the idea of systems as a kind of imperialism or brainwashing technique. I could not see myself as an imperialist (or colonized) researcher, and, I did not want to take the risk of being labelled as one.

On the other side, in TOP, there was a group of people well versed in the use of these methodologies. Nevertheless, this was not making things easier. There was a big

possibility of this group disagreeing with my use of these ideas. Therefore, I felt the need of a kind of advantage in order to gain credibility as a researcher.

Additionally, although the group never gave me some guidelines of what they were expecting, perhaps the idea of a formal evaluation was strong. According to our agreement my project was a formative evaluation. Perhaps, then, the image is of somebody looking at your work and pointing out the failures. This was not how I pictured myself here, nor did I think of myself as an expert evaluator. Additionally, some people in the group were also uncomfortable with this idea.

My knowledge of the situation at the time was superficial. Furthermore, it was difficult to express my ideas due to the language. Therefore, I thought that presenting me in the guise of an evaluator was too much. I did not want to present my feedback as certainties. I wanted to present my feedback as ideas useful to reflect on the group. I wanted to avoid remarks that could lead to conflict. Consequently, I was planning to talk about topics concerning the whole group. I did not want to pin point anybody. One of my problems was to choose the content for the feedback. The other problem, more methodological in nature, was how to give that content. With this last problem in mind I turned to Wittgenstein's language games.

5.5.3 Drawing Guidelines

The idea of using language games was not new to me. I was toying with the idea of intervening through interviewing, taking the opportunity to make people reflect about their activities. This was, even without knowing that later they were going to require from me some feedback, back in June 2005. This was partly because of my belief that it was impossible not to intervene on a situation, so it was best to have an intention with that intervention. Later I discovered in my engagement with TOP that they in general held the same belief. In fact, they were evaluating interviews as ways to foster participation (session #14, #21).

In my case, I based the belief on the notion of language games. From this perspective language is a tool. We do things with language. Methodologies and methods are language games, and consistently with this, they are ways to do things with language

as I argued in Chapter Three. Yet, the same argument implies that in order to intervene and do things, methods and methodologies are not the only way.

For instance, Whitaker (1996) drawing from Wittgenstein argues that the representation of ethnographic accounts can be use to affect and change a situation. By this means what he is doing is introducing topics, themes, concepts in the language game in place. This is not far from my own point of view.

After negotiating my agreement in October 2005 the idea of having my feedback was introduced. This reinforced my initial intention. At that time perhaps I was not very sure of the idea of interviews as a way to intervene, and perhaps I was timid to call my involvement an intervention. After the introduction of my feedbacks, I was less concerned about using the label intervention. I imaged myself using the opportunities available to "push boundaries". The question now that my feedback was on the horizon was how in the absence of systems methodologies, I was going to apply language games ideas and define some guiding principles in the process.

One starting point was to look at my strengths. My salient point in relation to TOP's multidisciplinary knowledge was my linguistic background. Hence, I set to use it, linking linguistic concepts to my observations. The process that I envisaged was following something like this:

> But do you really explain to the other person what you yourself understand? Don't you get him to *guess* the essential thing? You give him examples, —but he has to guess their drift, to guess your intention." — Any explanation which I can give myself I give to him too. — "he guesses what I intend" would mean: various interpretations of my explanation come to his mind, and he lights on one of them. So in this case he could ask; and I could and should answer him. (Wittgenstein, 2001, §210)

Due to my language limitations, I did not really hope to be absolutely clear in my speech. Even so, I could look to be clear on my intention. Again, intention is what I needed to reflect on, an idea also found on Relevance Theory (Sperber & Wilson, 1995). I was also aware of language as a "labyrinth of paths. You approach from one side and know your way about; you approach the same place from another side and no longer know your way about" (Wittgenstein, 2001, §203). How can be known if we

are talking about the same thing when different people can approach the matter from different sides?

My idea was to let people explore and play with the issues from different directions. Perhaps in this way with some wandering around the issues, we as a group, could understand the different directions involved. This was not so difficult. They usually did that in their meetings. They used to bounce ideas each other all the time. My role was more to be there and do some occasional steering of the course and keep them interested.

When I am proposing language games inside the language already in place I am aiming to some kind of following in Wittgenstein terms. How can we know if the rule was followed? In my case, I was taking advantage of the people of the group being used to playing with concepts, so I gave them concepts to play with, and I was of course seeing what was happening and trying to influence the game, like a feedback mechanism. If they did not get the game, I tried to push the ideas again. The problem with a following is that it is very difficult to know if people got it. They can get a fortunate following. Therefore, it was important to see how they played with the concept, explored different avenues, and if they exhausted the concept without finding any relevance my role was to find ways to reintroduce the concept and allow them further explorations until a point in which I felt that the understanding was good enough.

However, it is important to note that all this explanation from the language games perspective does not mean that I was not using systems thinking at all. For instance, I found useful the CATWOE mnemonics (Client, Actor, Transformation, Weltanshauung, Owner, Environmental constraints) (Checkland & Sholes, 1990). Particularly, Transformation and the Weltanshauung were important to reflect about my purposes. I conceived the transformation of the process as one taking the language game in place and transforming that with the introduction of my language games or ideas. The Weltanshauung was in line with avoiding judgements, imperialism and conflict.

It can be said that I used these concepts to orientate my thinking. However, my "methodology" for the actual feedback was in a certain way similar to SSM. Both were relying in a construct to interrogate a situation and reach some kind of accommodation or recognisance on the issues. In SSM the construct is a model of a purposeful situation built following some conventions. In my case, the constructs were theoretical and philosophical concepts in language.

The good outcome of the meeting and the parallels drawn gave confidence on the strategy. Consequently, I used the same basic ideas to guide my next feedbacks. The difference was that contrary to this one, which was aiming to cement my position in front of the group, in the others I focused on developing ideas on intention. However, as in the first one, I took and adapted those ideas, to make them relevant and useful as a feedback for TOP.

5.5.4 Purpose and Content of the Feedback Sessions

As it was said on Chapter One (also Figure 1.1), the feedback sessions were the convergence points for all the activities while on the field. From the point of view of defining my approach to the feedback, the first was the most important one. It was the only one in which I was not consciously thinking about my intention when I delivered. For this reason, I frequently contrasted ideas of intention with the happenings in this session, which I considered less "contaminated" by theory and further reflections, allowing less biased reference for contrasting ideas about intention.

From the point of view of intervention the session had two purposes. The first was making the team aware of how they were referring to one of the main objectives on the PFA and the implications of that interpretation. In my view, their interpretation was problematic. I supported my arguments on philosophy of language and linguistics, particularly the problem of why names work to refer to people (McGinn, 2002). One position is that names work as a shorthand of everything that describes the person. The other argument is that they worked as a chain of uses. We call somebody a name because we continue a socially established use. I show that the way in which

they were referring to the objective was following a social use that was now detached of the original ideas behind the objective.

The second purpose made the case about the need to use more written media in their work. It relied on Ong's (1982) ideas of how orality and literacy affect the way in which knowledge is constructed. Accordingly, if knowledge relies on orality, it will lack complexity, and it will tend to repeat the same ideas. Constructing knowledge in a written form allows for the development of more complex ideas.

Notice that in both cases I proposed theoretical/philosophical themes to reflect on their practice. This way to portray the feedback was not perceived as threatening. They found this very engaging and useful. I saw that future sessions were using more visual aids to construct knowledge. On the objective, they did not change the way to refer to it, but it seems that they were more aware of the limitation of their interpretation of it. They added more caveats to the work related to this objective in future sessions. Using ideas about intentionality for the feedback was the role of my second and third feedback.

The second feedback explored how intentions were communicated in their meetings. It relied on understanding intention from the perspective of Relevance Theory and the notion of boundary in MS/ST. Based on these, I constructed the typology explained in Chapter Six. This typology was useful to describe some argumentation's dynamics on their meetings. I use it to point out how, on many occasions, they lacked focus in their discussions, and, consequently, it was difficult to agree on a course of action.

In that session, I explained a version of the typology that later was enhanced thanks to the feedback that I received from TOP. The team in turn found the typology useful and decided to use the ideas to reflect about their practice in a session in December that year.

The third feedback was delivered just before leaving the setting. It used the Philosophy of Action and was exploring the concept of intention. This is explored in detail in Chapter Seven. My last feedback was not as coherent as the other ones. I was not yet set about how to understand intention from the perspective of Philosophy of

Action. Basically, I showed the team a wide range of approaches to intention and how difficult it was to defend under each one of them that our actions (TOP's intervention and my own ones) were intentional.

What I tried to convey on the feedback was the hypothesis that an intervention process could benefit from having clarity on each one of the aspects that were mentioned on the approaches to intention. My aim was to make the team aware of the possibility of making their work more intentional. Some of them said that was a lesson that they will try to apply.

5.6 Data Sense making

The previous sections in this chapter show how the work of propitiating the research events and gathering data was done. This section moves now to show how I started to make sense of the data gathered, approached the analysis and organised the findings explained in later chapters. First I will show some considerations about the transcriptions and how they were enriched through the development of the findings. Next, I will show issues that affected on how I decided the themes.

5.6.1 Transcribing and Sieving the Data

Originally, I aimed to transcribe every research event in the field: interviews, feedbacks and meetings. However, I started to lag behind with the process of transcription even after the first session. On one hand, there was the problem of the massive amount of data generated in a meeting (which I discovered exceeded by a lot the one in an interview). On the other hand, I had problems understanding the recordings (and the meetings). I lacked the background about the context and sometimes even the pronunciation of the English was proving difficult for me. Although my understanding of the meetings greatly improved in few months, I was deeply troubled by my delay with the transcriptions.

However, I found authors in the literature questioning the nature and need of full transcripts (Farías & Montero, 2005; Halcomb & Davidson, 2006; Holliday, 2007; Oliver, Serovich, & Mason, 2005). The arguments were the cost/benefit relationship

of the activity, and the supposed objectivity of the transcriptions. Consequently, as an overall guideline, I decided to transcribe what I saw as critical segments for my work. They are mainly related to ideas of purpose in the case studies, and references to methodologies.

These segments provide the raw material or "illuminating instances" (Holliday, 2007, p.84) that makes possible later analysis. It is usual that these instances are small fairly independent paragraphs that are connected by the narrative of the researcher. In my case, the length of these instances varied from very detailed transcriptions to meetings that I did not consider important so that there was barely an abstract on them.

However, in meetings that I perceived as crucial for my work, especially feedback sessions, I was not just transcribing. I also complemented, enriched the information on the meeting. I documented my reactions to what was being said, and what was going on behind my actions. Because I was looking forward to understand my intentions, I was trying to disentangle every small detail of my action in line with first person Action Research (Chandler & Torbert, 2003).

My transcriptions were using blocks of text on two different colour backgrounds. One was used to refer to descriptions of the observable happenings and actions in the setting. The other was used for explanations of the actions and reflections. In these explanations, I drew from internal documents, past observations, notes taken in the meeting and inside information of my own perceptions produced immediately after the session. In some cases, I was not very sure of my actions, so I gave some tentative explanations to these situations.

These kinds of descriptions about my actions were not technical in the sense that they were not using concepts of philosophy of language or philosophy of action at this stage. Once I was more settled in the field and the first concerns about how to intervene were behind, I started to focus on more technical descriptions of intention.

The first of these technical descriptions was based on Relevance Theory and boundaries (explained on Chapter Six). I started the process of developing categories for Boundary Games as I named them to analyse meetings. It was a process of

applying the categories, see if they were making sense and if not, rethinking them to develop new categories. They were based on reflections in many segments of interaction belonging to very different sessions. However, I just felt satisfied when applied to a whole session they were making sense.

I also complemented the information on the transcriptions with reflections using Philosophy of Action. For this aim, I constructed a checklist of categories derived from this literature. They covered different aspects that the literature pointed out as important to understand intention. It comprised core elements for explaining intentions such as belief, desire, and plans. It also included elements used for explaining an intentional action such as intention, ends, reasons (normative, impersonal, motivational, promise, belief). Besides, it included elements that posed difficulties for intention-based explanations such as trying, wayward chains, and luck.

My purpose, in the spirit of a deductive logic, was to look for those elements that were not useful to reflect on intention. In other words, the idea was to falsify to keep the useful ones. I used the checklist's categories to reflect on my overall intention, intentions in specific planned tasks such as interviews and feedbacks (although this did not cover my first feedback), also I was using it to reflect after some of my unexpected actions. This work led to the developments in Chapter Seven.

5.6.2 Organising my Learning Process in Reflexive Cycles

At the end of my involvement in the field I got a huge amount of information. There were all the philosophical and theoretical reading, my reflexions on the field, plus all the information gathered through interviews, meetings, feedbacks. The question was how to deal with it, how to organize my process and make it clear to myself and the reader. Action Research literature proposes organising the research process in cyclical stages such as intent, act, review phases posed by Dick (1993). When you organise cycles you can show how a given cycle is supported by past ones and is in turn supporting future ones. Sarah et al. (2002) suggest that it is useful to adjust the process to organisational cycles.

Consequently, when I approached the fieldwork, I tried to adjust my cycles to the delivery of my feedback, namely three cycles. However, I found very difficult to adjust the way in which I was learning to these stages. This was not really mirroring my process.

For instance, I established a way to intervene thanks to the first feedback. The approach changed very little for the next two. Additionally, the content, the ideas that I was trying about intention in the remaining two feedback sessions were basically different. One was relying on Language Pragmatics (feedback two), the other on Philosophy of Action (feedback three). So even on the specific topic of intention, knowledge was not constructed supported by the previous feedback session. Another problem with this interpretation is that when the topics were presented to TOP, they were at an incipient stage of development. The maturation of the ideas was produced long after the end of my involvement in the field, through more reflections.

Consequently, it made more sense to make a distinction between a stage of the work on the field (learning cycles) and after my involvement on the field, a stage better portrayed as reflection cycles. In the first stage, I was acting and adjusting my actions for future interactions. The second, involved reflecting about all the gathered experiences and the philosophical and theoretical readings that were still on the go. With this aim, I organised cycles around the process of developing the themes presented on feedback sessions two and three. For most of the time, they were not crossing each other. The first cycle originated mainly by feedback two was developed as intentional action deriving from Language Pragmatics. The second cycle originated from feedback three and developed as intention deriving from Philosophy of Action. These cycles have their own characteristics. They will be explained with more detail in Section 6.3 and the introduction to Chapter Seven. At the end, I saw ways in which both reflections cycles, both lines of thought could be entwined, as will be explained on Chapter Eight.

Under this view, feedback sessions were an initial opportunity to test the ideas on intention, later they were the seed for reflection cycles. The feedback then is better considered in the light of initial reflections about intention, not really on actions to improve TOP's circumstances. As with some characteristics mentioned in Chapter

Three, this one also made me differentiate from an Action Research process. It is for this reason that in Figure 1.1, the idea of Action Research does not show so prominently.

5.6.3 Deciding the Main Themes

When I first approached the problem of writing the thesis I had a very different plan from what ultimately was presented. My starting assumption was that it does not matter what intention is, it is necessary to act in some way in order to achieve some effect with that intention. Consequently I look for ways to "visualize" the intention or understand their effects. Wittgenstein's philosophy and Language Pragmatics were up to this role.

My first approach was only focused in language. After a while I discovered Philosophy of Action. I became aware of the different approaches here to understand intention. In the light of this branch of philosophy I started to consider that while here they were dealing with the "true" nature of intention, Language Pragmatics was not. I saw Language Pragmatics as the façade of intentions. This was so because it was possible to witness language but intentions were hidden inside the actor. These hidden intentions were manifesting through language.

My plan was to use the evidence provided by Language Pragmatics to uncover which of the different approaches to intention on Philosophy of Action was behind the superficial appearances. Language Pragmatics was the way to look behind the façade. However, I discovered that there were ways in which the approaches in Philosophy of Action were showing and manifesting their effects. The role that I planned for Language Pragmatics was not what I expected.

Additionally, I also saw that it was possible from the Philosophy of Action to conceive a role for the way in which intention was understood in Language Pragmatics. This is basically the idea of the dual face of intentions. This realisation was perhaps one of my last findings, almost at the end of my writing. This forced me to reorganise my writing. At the start of the writing process I was planning to show how Language Pragmatics was the way to uncover Intention in Philosophy of Action.

At the end, Philosophy of Action was helping me to give a place to Language Pragmatics to explain one of the faces of the two-faced phenomenon of intention.

5.7 Some Lessons

This chapter was mainly descriptive of the research process. It serves as the ethical and quality guarantor of the research through the detailed explanation of the research procedures. It provides background information about the context and projects of my research participants. It describes the development of my relationship with TOP. It shows my intervention component and how this was informed by my philosophical assumptions of language games. It shows how the data was gathered and how it the approach to its analysis emerged. Besides it shows how the research methodology planned in Chapter Three was adapted according to the events in the field.

Additionally, this Chapter is providing background information for the reader to understand the context of the research and the work leading to the findings. Those findings corresponding to both faces of intention and their relationship will be now presented on the following three chapters.

PART THREE: DISCUSSION

Chapter 6 Doing Things Intentionally

The early chapters of this thesis present the area of contribution (Chapter Two), the way in which I methodologically approach the research (Chapter Three), the initial philosophical and theoretical explorations of intention (Chapter Four), and an overview of the empirical exploration on the field (Chapter Five). This chapter starts the process of contributing to the role of intention in interventions combining philosophy, theory and empirical work.

This chapter specifically goes deeper into the exploration of the present directed intentional action. It understands an intentional action as action in language. Consequently, it helps to explain the communicative role of intentions. Namely, helping to make sense of actions (our and others) and, as a result, helping in coordinating actions among actors as was proposed in Chapter Four. Towards explaining this face of intention, I devised an analytical framework drawing from my observations of TOP's interactions, in the way of a second person Action Research/practice, and from theoretical sources such as Boundary Critique Theory in MS/ST and Relevance Theory in Language Pragmatics.

The framework was constructed based on my observations and interactions with TOP, through a deductive strategy. I was observing the interaction, conjecturing possible effects of actors' communicative actions on the boundary of what is considered relevant and reflecting about their coherence in order to refine the conjectures. An early prototype of this framework was in turn presented to TOP. Their comments and critique helped to improve and develop the arguments in later reflections (see Figure 1.1). Here, I will be using some of these interactions to illustrate the framework and how it can be used to analyse interactions.

The effects of the boundary are mainly interpreted using the Theory of Relevance. As Chapter Four presented, this theory provides a mechanism to assess the effect of communications on the process of reaching inferences. Basically, Relevance Theory assumes that communication is about expressing and recognising intentions. The

audience judges the intention and relevance of what is said, for the cognitive effects produced. If we can connect what is being said, and additionally we do not have problems understanding it, we can then consider it relevant. Otherwise if we cannot connect the information with our background, or it is too difficult to process the information, then what is said does not affect our cognitive environment. It is not relevant.

The chapter starts by explaining different takes on the concept of boundary and stating which one will be used here. Particular emphasis is placed on what is taken to be relevant in a situation, and on how language pragmatics and the theory of relevance can help in understanding effects on the boundary. Based on this, I propose a framework of six operations or intentions and the ways in which they affect a boundary.

After the explanation of the different operations, some of the witnessed interactions in the field are described using the proposed operations. Next, guidelines for intervention are derived from the framework. Finally, some implications for Boundary Critique Theory are presented.

6.1 Boundary

The concept of boundary introduced in Section 2.2.3 suffers from a kind of paradox in systems thinking. On the one hand, it has been accepted as a central concept in the field; on the other "it is one of the least discussed, especially in the seminal literature" (Mingers, 2006, p.65).

To some extent discussions on the concept of boundary resemble the disciplines and ideas that had fed systems thinking. Mingers (2006) manages to trace contributions to the concept of boundary from perspectives as diverse as physical sciences, mathematics, conceptual boundaries, social systems, and boundaries as observer's constructions.

Drawing from these perspectives, Mingers highlights some issues:

- Some boundaries, especially in physical systems do exist. Yet, observers always have a purpose with them. Due to this they choose how to perceive them and in the process, they also conceive them.
- "boundaries are of different types —edges and surfaces, enclosures and membranes, and demarcations; and they have particular effects— separation, containment and constraints" (Mingers, 2006, p.99).
- Some of the strategies used to conceptualise boundaries such as mathematics, geometry, and language seem to assume perfect distinctions of the boundary. For instance, geometrically, the usual representation for a boundary is by a circle on a paper that distinguishes perfectly what lies inside and outside of it. However, in practice "this does not hold with distinctions and difference being both imprecise and inevitable judgemental in their application. But, as with physical boundaries, distinctions do not have to be perfect to work and allow us to communicate and interact" (Mingers, 2006, p.100). Similarly, Wittgenstein (Wittgenstein, 2001, §71) said: "Frege compares a concept to an area and says that an area with vague boundaries cannot be called an area at all. This presumably means that we cannot do anything with it. —But is it senseless to say: "Stand roughly there"?".

Regarding social boundaries, Mingers relies on autopoiesis theory. He explains how the operations inside the system generate the boundary. However, there are disagreements about the nature of these operations and the nature of the boundary generated. For instance, on one side of the discussion, systems operations are biological (Maturana, 1988), on the other side systems operations are communications (Luhmann, 1998). On the biological side, the boundaries are physical, e.g., the skin of the organism. On the communicational side, the boundary divides communication from living beings, but it is difficult to specify its nature.

Finally, he discusses "a central cleavage within systems thinking— whether boundaries could be said to exist at all, ontologically, or whether they were in fact always simply constructs of the observer" (Mingers, 2006, p.100). Mingers' approach on this takes a critical realist perspective (Mingers, 2000). In this way, he looks for a

"powerful argument for the independent existence of both systems and their boundaries" (Mingers, 2006, p.100).

However, from the Wittgensteinian point of view that I am taking, the construction of such boundaries will be just another language game. As just another Language Game it can be constructed and affected by actors according to the given use. Consequently, here I depart from Mingers to look for other systems-thinking authors closer to my position.

Wittgenstein's position looks more compatible with a line of work introduced on Chapter Two: Boundary Critique Theory. Authors such as Churchman, Ulrich and Midgley are relevant for the argument here. Churchman's ideas on ethics and values were already introduced in Chapter Two. It was also shown that for him, intentions affect the boundaries of the problem to be tackled. His work does not hold boundaries as something real but something that can be constructed.

> 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)

Ulrich's position reinforces this idea. "The boundaries, structures and goal states of social systems are not defined physically, as in the case with organisms, but rather by *contexts of meaning*" (Ulrich, 1983, p.330). Because the boundary depends on these contexts of meaning, they depend on our judgments.

> Whenever we apply the systems concept to some section of the "real world", we must make very strong a priori assumptions about what is to belong to the system in question and what is to belong to its "environment". We call such judgements boundary judgements. (Ulrich, 1983, pp.225–226)

Ulrich also states that we cannot really engage with the system, and, consequently, with intervening in it, without making prior boundary judgements:

> Because such a judgment is constitutive of the empirical and the normative content of the systems concept in a given situation, it must be made before the systems concept can meaningfully be applied to describe the situation. Hence, both the boundary judgement and the

> systems concept it defines must be regarded as being relatively a priori to any empirical statement about the system in question. (Ulrich, 1983, p.191)

Midgley´s work makes it possible to establish connections between boundaries and methodologies. He suggests that boundaries can be understood as "social and personal constructs that define the limits of the knowledge that is taken as pertinent in an analysis" (Midgley, 2000, p.35).

Boundaries have an effect on how we tackle issues. Where exactly those boundaries "are constructed, and what the values are that guide the construction, will determine how issues are seen and what actions will be taken" (Midgley, 2000, p.36). Moreover, Midgley also states that different boundaries will give rise to different methodological choices. I would add that different boundaries imply also different uses in those methodologies and by extension any other tool. Surely, if we were intending to use different boundaries in the knowledge considered relevant for issues such as the involved people, or the values, different ways to use a tool must rise.

6.2 Using Boundary to Pragmatically Understand Intention

Under the assumption that different boundaries imply different ways to consider a situation, one way to understand how intentions intrude on intervention is to look for how intention affects boundaries and how they affect what knowledge is considered pertinent/relevant in the situation. Using effects to understand something bears pragmatist underpinnings that are not strange to MS/ST (Ormerod, 2006). For instance, Churchman's work is based on pragmatism and this line has also been explored by Ulrich (2001) who cites the pragmatist philosopher Peirce:

> Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object. (Peirce, 1969, para.402)

Peirce's phrase is proposing an approach to understand an "object of our conception". That approach is based on effects. Hence one approach to inquire about intention is through its effects. This pragmatic dimension also resonates with Wittgenstein ideas. Actually, the notion of understanding the meaning of a word based on use has given

rise to many pragmatic interpretations, not only in pragmatic philosophy but in language pragmatics as well (Crary, 2003).

In Wittgenstein's terms what I set out to find is some operations or language games that in an intervention can affect what is being considered relevant in a situation. For this purpose, I will look for some "games" that will represent different ways to construct and act on the boundary. According, to Wittgenstein the uses that we can give to a boundary are not objective, they are not set at all.

> 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 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. What can be said is that again Wittgenstein is giving conceptual space to finding some uses on our own. It is here where Relevance Theory (introduced in Section 4.1.3) comes into play. I can conjecture possible uses, boundary games and then use Relevance to evaluate if they make sense.

6.3 Boundary Games

> it's to do with your intention when you are doing whatever is the communication that you are doing. (Grace, Session #41)

In developing the classification of possible ways to affect the boundary, I followed a deductive strategy. As such I started with a framework encompassing ideas from Language Games in philosophy and theories such as Boundary Critique and Relevance. The basic intuition is that intentions can trigger some dynamics of language and actions in relation to the boundary. I started the process conjecturing three intentions or operations on the boundary.

One is the operation of enclosing something inside the boundary, designating the area relevant to tackle the issue. The second came inspired by Wittgenstein and is the idea that we can follow a rule, so we can "move" inside the area previously enclosed.

Finally, sometimes we reject something because now it does not seem relevant anymore, so we erase the boundary.

Based on this initial hypothesis, I started my empirical work, which included observing other people' actions as well as reflecting about mine. I was following the idea of first and second person Action Research (Reason & Bradbury, 2006b). On the first I was looking forward to acting with awareness. On the second, I was exploring intent through "content and conduct" (Torbert, 2006, p.211).

I was continuously comparing my observations, reflections and fragments of interactions with my initial conjectures. In the process, I tuned the ideas, created new "games" and in some cases I also disposed of them when the concepts did not fit with the observed interactions. It was a deductive process of formulating games and trying to falsify them.

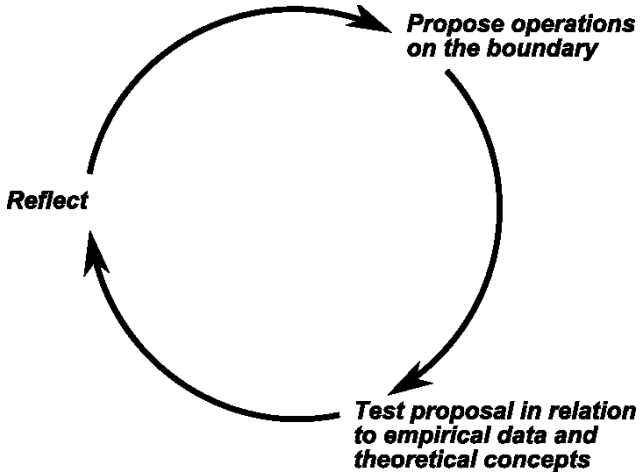


Figure 6.1. Tuning games cycle.

Although the language to describe these games is based on relevance theory as introduced in Chapter Four, there was a pair of guiding ideas for the process. One was to find by "convenience" a set of games (Wittgenstein, 2001, §569) to describe intention in relation to the boundary. The second was to find games, intentions useful from the point of view of intervention. This means finding "purposeful action[s] by … human agent[s] to create change (Midgley, 2000, p.113). In this case, the intentions that I am looking for were aiming to create changes on the boundary.

What kind of boundary is implied here? This question resonates with one that Wanda posed in my second feedback. She inquired if the boundaries that I was conceiving belonged to a group or an individual. Relevance let us consider both cases. In the case of an individual, the boundary of what is considered relevant in a situation (Midgley terminology) can be conceptualized as a private "cognitive environment" (Relevance terminology). In the case of a group of actors, the boundary can be seen as a social construct that encompasses the "mutual cognitive environment" shared with one another. In this light Midgley's intervention concept in the social realm can be paraphrased as *purposeful action to modify and extend mutual cognitive environments*.

The fragments that were used to infer the games belonged to many different sessions. Here for convenience in this section the games are just defined. The order followed responds to didactic reasons. I consider the first the easiest to explain and the last the hardest.

6.3.1 Following

> To act in agreement or compliance with; obey: follow the rules. (Following, n.d.)
>
> do you mean [they] are not following in terms of they do not understand, or they are not following because actually they do not agree? (Dianne, Session #41)

The answer to Dianne's question is that ***Following*** refers to the idea of understanding what has been said. When you understand you can produce a statement that is in agreement and compliance with the rules. However, this does not mean that people agree on what has been said. It is possible to explain what has been said, show other people that you "follow" the whole thing and afterwards explain why you do not agree on that.

Following was one of my original games and perhaps the one that fewer transformations suffered in the research process. It was inspired by Wittgenstein's idea of following the rules of a game. ***Following*** presupposes that the rules are already present and, consequently, the boundary "around" them.

As in any game the rules do not specify all the possible moves, but they make it possible to decide if a move is consistent with the rules. In terms of relevance, the

already present assumptions do not describe all the possible inferences. However, we can see if it is possible to infer the "move" from the mutual cognitive context. ***Following*** encompasses all the possible inferences on a given context. To be mutually manifest is what it is important in following. To be manifest "is to be perceptible or inferable" (Sperber & Wilson, 1995, p.39). For instance, it is unlikely that we had thought about the fact that Noam Chomsky and Julius Caesar never had breakfast together. However, is easily inferable and consequently, manifest (Sperber & Wilson, 1995).

Although this kind of action occurs inside the established boundary it still has some effects on the boundary as a whole. ***Following*** does not really have the aim of producing big cognitive effects. There is not new information that enables this. However, "the more a representation is processed, the more accessible it becomes. Hence, the greater the amount of processing involved in the formation of an assumption, and the more often it is accessed thereafter, the greater its accessibility" (Sperber & Wilson, 1995, p.77).

Greater accessibility implies a reduction in the cognitive effort applied. With less effort, there is an increase in the relevance of the rules. More relevant rules make a clearer stronger boundary. For the people involved it becomes easier to play the game. ***Following*** it also helps to make new connections and inferences between the already present information.

The situation is shown in Figure 6.2. At the beginning, there is a boundary, next the ***Following*** of a movement inside the boundary is enacted, and finally as a consequence the boundary is clearer and stronger.

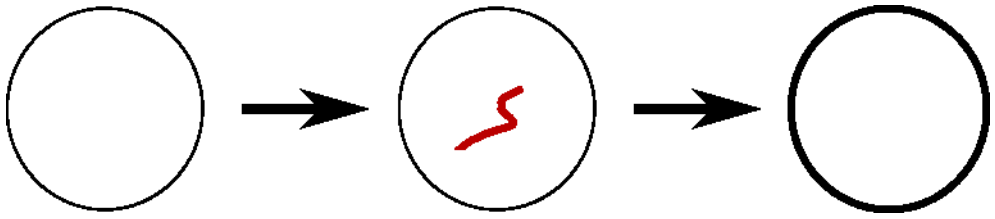


Figure 6.2. Following.

6.3.2 Enhancing

To make greater, as in value, beauty, or effectiveness; augment. (Enhancing, n.d.)

The intention behind ***Enhancing*** is, in principle, very similar to ***Following***. Both games act in agreement with the established boundary. However, while in ***Following*** what is said is inferable from the mutual cognitive context, here new information is introduced. The new information is not inferable from what is already inside. Nevertheless, the new information let you infer new things, it helps to produce new and different ***Followings***, without changing the core of the already established boundary. The idea of the game is to expand the boundary.

The difference is also explainable in terms of relevance. While in ***Following*** the idea is to ease the effort required, here is about producing greater positive cognitive effects. The situation is shown in Figure 6.3. It starts with an already present boundary. Next, some new information is presented expanding the boundaries of what is seeming relevant. The final boundary covers more "ground" and because there are more cognitive effects, the boundary is more relevant hence the boundary is stronger.

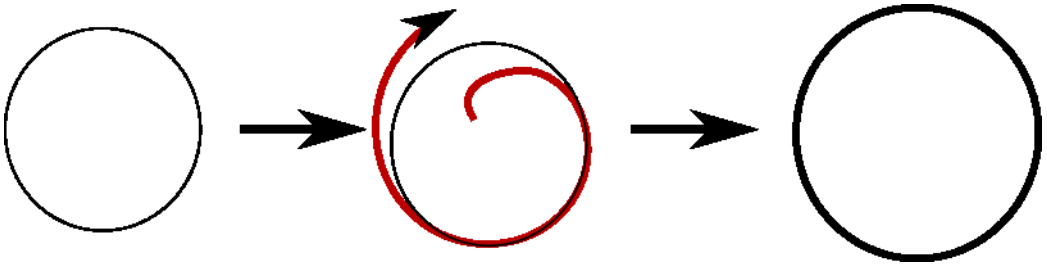


Figure 6.3. Enhancing.

Enhancing is similar to what Jackson (1991) calls an imperialist strategy. Here an idea is to have a problem-solving strategy as dominant. Next if some ideas from other strategies are seen as useful, they are subsumed inside the dominant strategy. The strategy is ***Enhanced***, its focus does not change, it only receives the help of new information producing more cognitive effects.

6.3.3 Wandering

> To go by an indirect route. (Wandering, n.d.)
>
> It is related to following (Frederick, Session #41)
>
> If it is identified as a negative then it reinforces the boundary and makes it more positive. (Administrative Assistant, Session #41)

Wandering is related also to ***Following*** in a strange way. Again as in ***Following***, the idea is to act in agreement with the established boundary. As in ***Enhancing*** it introduces new information. However, in ***Enhancing*** the new information becomes part of what is seen pertinent in the analysis. In ***Wandering*** the new information stays outside and is not relevant for the analysis. At the end the outcome is that the boundary becomes clearer in the same way as following.

The reason that the boundary gets clearer is because ***Wandering*** is showing and making other people aware that the thing that is just said is in direct contrast with the boundary. On one side what has been said is not pertinent in the analysis. On the other side, it emphasises what is pertinent, hence the idea of indirect route, hence the idea of a negative element that reinforces the boundary.

As in ***Following***, ***Wandering*** works by reducing the cognitive effort required to produce the inferences. This is shown in Figure 6.4. First, it starts with an already present boundary. Next, some new information is presented, but this information can be understood as a movement outside the boundary. The final boundary is more clearly defined because it becomes easier to identify where it lies.

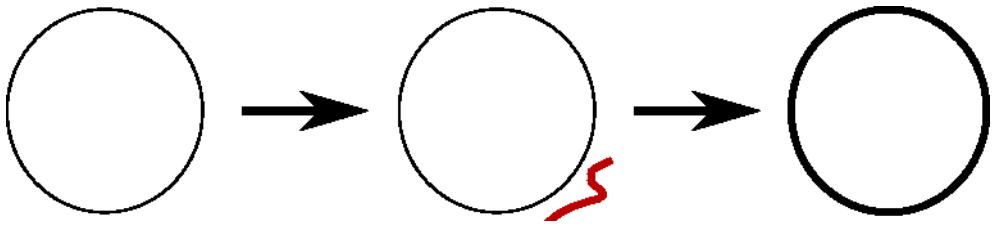


Figure 6.4. Wandering.

6.3.4 Challenging

> call in question. (Challenging, n.d.)

Up to this point, the role of the different boundary games has been to reinforce the boundary. ***Challenging***'s role is the contrary. ***Challenging*** is to say that what it is inside the boundary is not pertinent for the issue at hand.

Along with ***Following***, ***Challenging*** was also present in my original hypothesis. Even so, my understanding of how it works changed greatly in the reflection process. I started with the hypothesis that this operation could erase the affected boundary. However:

> What the names signify must be indestructible; for it must be possible to describe the state of affairs in which everything destructible is destroyed. And this description will contain words; and what corresponds to these cannot then be destroyed, for otherwise the words would have no meaning. (Wittgenstein, 2001, §55)

Boundaries as names have meaning even when everybody accepts the ***Challenge*** and the previous boundary seems forgotten. There is always the chance of "resurrecting" the boundary later.

In order to ***Challenge*** both inside and outside boundary information can be used. The inside information is used to look for contradictions. Outside information looks to show that from a different perspective the selected boundary is problematic. Consequently, if the ***Challenge*** is from the outside a second external boundary is implied, if the ***Challenge*** is from the inside no other boundary is implied.

From the point of view of relevance, ***Challenging*** reduces the positive cognitive implications or increases the processing effort required to operate inside the boundary. It shows that some previously accepted implications lack grounding, or new information shows that is not so easy to obtain the inferences.

The situation is shown in Figure 6.5. It starts with the already present boundary, next, the boundary is called into question, fractured from the inside or/and outside, finally as a consequence the boundary gets weakened.

Figure 6.5. Challenging.

6.3.5 Probing

> The act of exploring or searching with or as if with a device or instrument…An investigation into unfamiliar matters. (Probing, n.d.)

Probing differs from all the games up to this point in relation to its inputs and effects. In all the others, it is easier to understand if the information comes from inside or outside of the boundary. In all the others is easier to know if the boundary has been weakened or strengthened. Here none of these is clear. ***Probing*** involves exploration and, consequently, it is very difficult to know what is going to be found.

Probing can be executed when the boundary between the participants (the mutual cognitive environment) is not clear. "The boundaries of cognitive environments cannot be precisely determined, if only because the threshold between weakly manifest assumptions and inaccessible ones is unmarked" (Sperber & Wilson, 1995, p.45). If the threshold is fuzzy it is normal that someone will call attention to it in order to clarify it.

However, there is another situation that deserves attention. This is when you probe and try to understand the patterns that underlie what is given. (Johnson, 2005). In both situations, the intention on the boundary can be understood as focusing on some aspect or "segment" to understand the potential of it. In both situations actors are looking forward to find "where" the boundary is.

Because of the fuzziness of the situation, it is difficult to know if the area probed is inside or outside of the boundary. It is also difficult to understand the effect on the boundary. Sometimes the way the situation is probed can produce effects that mimic effects of all the other games.

Consequently, the distinctive characteristic of ***Probing*** is the focusing on some area. One of the speakers calls attention to the problematic area. In some way it makes more relevant the area of the probing. The intention is to trigger a response to clarify the boundary. There is not an intention to change the boundary or the rules of the proposed boundary. The boundary is stable. You are just focusing in one "segment" of it.

In Figure 6.6, first there is an already defined boundary, next you are crossing the boundary, moving inside and/or outside, testing where it lies and next this part of the boundary gains relevance.

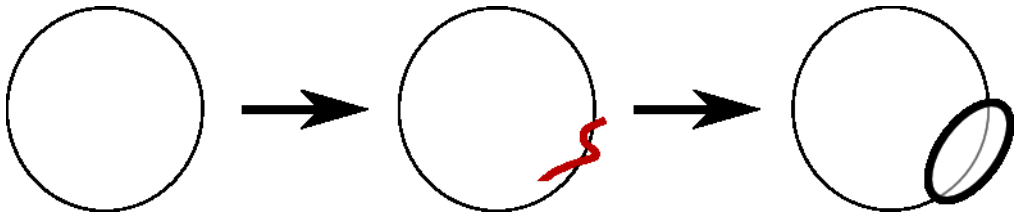


Figure 6.6. Probing.

An easy way to show a ***Probing*** is when somebody has doubts about the relevance of something and asks about it. We do not have a way to know beforehand if what s/he asks is inside or outside of the boundary. Independently of the answer, what the question does is to focus the audience to consider the issue, and if it is very complex, a discussion can arise around this boundary "fragment".

6.3.6 Setting

> to establish for others to follow…to present as a model; place before others as a standard. (Setting, n.d.)

As the word suggests, the idea is to establish some kind of rules or space and over it the other games and operations can be applied. ***Setting*** was also one of my original hypotheses and perhaps the one that is the most difficulty to characterize. Part of the difficulty is that I could not find criteria using relevance theory.

My first take on it was to think about an operation generating big contextual effects and easy to follow, almost like a combination of ***Following*** plus ***Enhancing***. However, what ***Setting*** does is to say which rules or cognitive environment are going to be used to make the inferences. In this scenario, one can propose something new just to find that nobody understands or can follow what has been said. Consequently, what identifies setting a new boundary is not the amount of cognitive effects or easiness, although, taking these as guidelines it will be easier for others to see the relevance of the new game.

The proposal here is to identify a new boundary by the kind of answers that are considered pertinent to the problem at hand. This space of answers carries implicit questions that make possible the identification of the boundary. As Garfinkel states:

> Attending to the questions rather than the answers and looking for the implicit question hiding behind the answer are a useful device for analyzing explanations and understanding historical shifts. In general, epochs in history, the history of science or any other history, are marked as much by the questions they ask as by the answers that they give. (Garfinkel, 1981, p.8)

Accordingly, the history of an intervention process can be considered as a succession of ideas or games responding to central questions. These questions change over times and correspond to the different boundaries settled. What marks the difference among the different questions in the process is "their practical point of view: they are oriented toward different purposes" (Garfinkel, 1981, p.11).

If we follow the process and there is a change in the purpose pursued by the boundary presented, if the answers that are expected change at some point, this will mean that we are in front of a new boundary and a ***Setting*** game.

Graphically (Figure 6.7), people do not trace boundaries from emptiness. There are always other boundaries from which to draw. Some of them are shared. They make part of mutual cognitive environments. Others are private cognitive environments. Private here does not necessarily mean that you are the only one with that knowledge. It only means that this knowledge is not shared with the other people in the specific interaction.

Next a boundary is traced taking elements from different boundaries effectively synthesising them under one boundary (similar to Midgley (1997) as explained in Section 2.5.2.3), and responding to a central question. Finally, the new created boundary is part of the mutual cognitive environment.

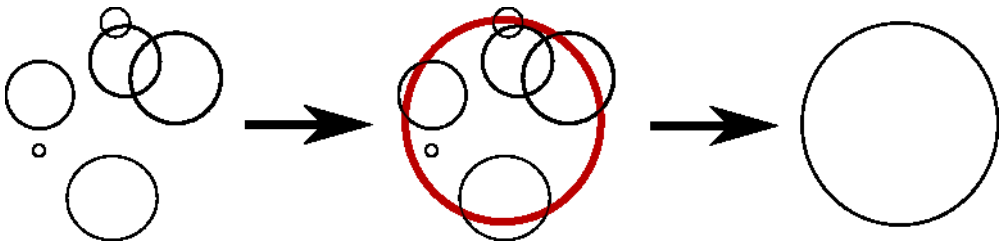


Figure 6.7. Setting.

6.4 Using the Games to Describe Intervention's Interactions

6.4.1 Some Caveats

One important idea in Relevance Theory is that "by producing an ostensive stimulus, the communicator therefore encourages her audience to presume that it is relevant enough to be worth processing." (Wilson & Sperber, 2002a, p.256). This idea triggers two considerations for the understanding of the dynamics of interaction. One is that ostensive stimuli can include from words and phrases to body language and speaking tones. Therefore, these possibilities can be seen as worthy of processing by the audience.

The other consideration is that everything in a conversation has the potential to cause effects. In a process of interaction the different parties have their intentions to change the cognitive environment of the others, and each party has their own set of assumptions that help them to make sense of what is being said. Then "as a discourse proceeds, the hearer retrieves or constructs and then processes a number of assumptions. These form a gradually changing background against which new information is processed. Interpreting an utterance involves more than merely identifying the assumption explicitly expressed: it crucially involves working out the consequences of adding this assumption to a set of assumptions that have themselves already been processed" (Sperber & Wilson, 1995, p.118).

Against all the changing backgrounds, I am proposing to organise and make sense of the movements in terms of the successive direction of intentions. This direction can be seen by the way in which the games affect the boundary of what is relevant. At the heart of the approach is Sperber and Wilson's (1995, p.254) idea of reflecting "a rather abstract property of the speaker's informative intention: the direction in which the relevance of the utterance is to be sought".

From this it can be inferred that the possibility to produce effects on a boundary in an intervention does not depend on the actors following a methodology or any formalised tool. Effects can be achieved through using gestures, words, metaphors, phrases or methodologies, in short, engaging in language games. This shows that apart from methodologies, interventions can be told differently (Keys, 1997).

6.4.2 An Illustration

The following interaction segment is extracted from my first feedback. In it, I am mixing transcriptions and descriptions of the action. Wherever possible I prefer to use the transcription because it is not hiding elements used in the interpretation. However, sometimes the segments of interaction are too long to be presented here. Consequently, I opted for summarizing the actions in the interaction.

I explicitly started my session in my first feedback explaining that the feedback was not only for TOP but also for me. The idea of doing the feedback could be understood as a first attempt to deliver on my agreement with TOP in 2005. However, I think that is better to understand this introduction as a ***Setting***.

There are two reasons for this. One is that the agreement was too distant in the past, increasing the effort required to process the information, so it does not have the condition of a ***Following***. Second, I also introduced the idea of a feedback for me. This idea was new, so I was effectively drawing from an old shared boundary (feedback for them) and a personal boundary (feedback for me) and joining both ideas under a new boundary.

Next I stated that my presentation was covering three points, the first of which was the research protocol. With this statement, I was introducing new information relevant to a boundary. However, this boundary moved slightly. Before the concern was the tension feedback for them, feedback for me. Now the kind of expected answers are around three points. The boundary is still partly relying on the idea of the feedback. Consequently, the idea here is a ***Setting*** taking part of the old boundary and bringing new elements again.

I also moved the boundary for a new ***Setting*** operation when I talked about the difficulties that I experienced due to language, culture and the lack of general background in understanding their activities. The same operation on the boundary continued when I gave special importance to my efforts to avoid obstructing or disrupting TOP's work with my questions.

When I described how I restrained my questions and how lucky I felt when somebody asked the question that was in my mind, a new operation appeared: ***Enhancing***. The central question still was to avoid disrupting their activities. However, I was giving new elements to expand and strengthen the boundary that I was establishing.

The group reacted to my descriptions laughing, something that I interpret as a ***Following*** and in a lesser degree an ***Enhancing***. They were acknowledging the information, signalling that they understood the context that I was presenting and in turn making such a boundary more relevant. It is also ***Enhancing*** because previously the information that they were understanding and with a good disposition towards my intervention was not present. Knowing the good reception enables possibilities of interaction that differ from the possibilities in a bad reception.

Next I talked about interviews. I explained that the space of the office that I was sharing with them was not appropriate for conducting the interviews, so that when I was interviewing someone other people were stepping into the conversation. I suggested that as a matter of protocol it was better to have those interviews in a closed space with a well-defined and rigid timeframe. Again I emphasised that I did not want to disrupt.

Although the topic here is about interviews, I classify this move not as a ***Setting*** but an ***Enhancing***. The reason: the topic was introduced to support the idea of looking for ways to avoid possible disruptions to TOP's work. Consequently, the "answers" are still focused to the same "question".

Next this conversation took place:

> (1:) Jorge: "Do you think it is sensible this measure?"
> (2:) Frederick: "Probably we will talk over the limit anyway".
> (3:) Dianne: "About the other day, that is all right with me, because we went over the 10 minutes!! Laughs"
> (4:) Jorge: "I have notice that with everybody, I go for just a moment and people keep talking and talking. At some point I get stressed because the conversation is taking too long"
> (5:) Dianne: "Ohh, nooo"
> (6:) Jorge: "On the other hand, I got excited because I was telling myself what nice information I am getting"

Asking in (1) about my approach was a way to ***Probe*** the boundary, a way to call into attention the information that I gave and trying to see if we were understanding each other. Frederick in (2) ***Settled*** a new boundary. My boundary was focused in exploring how to minimize disruption. Frederick's boundary acknowledged the possibility of disruption but minimized the importance of it. It is interesting to notice that Frederick also accomplished weakening my boundary by creating a new one without troubling himself with ***Challenging***.

Dianne in (3) introduced new information but supported the point made by Frederick. Consequently, she was ***Enhancing*** the boundary.

In (4), I was introducing more information inside the boundary concerned with avoiding disruption, ***Enhancing*** the possibilities from this point of view. At the same time, I was using this boundary to test the boundary distinguished by Frederick. I wanted to be sure that there were no concerns about these long conversations. Therefore, I was also ***Probing***.

In (5), although "ohh, nooo" is a very short utterance, it can be seen as accomplishing two operations. On one side, it was ***Challenging*** my boundary, weakening the idea of my concerns were founded. On the other side, it was agreeing with Frederick's boundary reinforcing it through a ***Following***, making easier to consider this boundary.

In (6) I am relaxed about how they are seeing the issue, so I ***Enhanced*** Frederick's boundary explaining why it was good for me.

Notice that this behaviour where the same spoken token have multiple effects is expected if these games behave as Leech's (1983) pragmatic principles as presented in Chapter Three. Consequently, the different games can potentially reinforce and even conflict among themselves. They also can be contravened, and, nevertheless, they are in some way guiding the dynamic.

Through this illustration, it had been shown so far ***Setting***, ***Following***, ***Enhancing***, ***Probing*** and ***Challenging***. There is one operation that is missing from this interaction segment: ***Wandering***. ***Wandering*** seems to appear frequently in the way of jokes. For instance, after the last illustration we continued discussing matters of participant observation in the setting and how my observations of the natural dynamics were unsettling for some people.

In this context:

> (7:) Mark: "I did not tell anyone but the title of Jorge's thesis will be The Office" (Laughs)

When Mark referred to "The Office", he meant the British TV social satire comedy about the day-to-day lives of office employees. The comments didn't stop there. They elaborated on the joke by matching some of the characters of this comedy series with some of TOP's members and the situations. After the series of jokes, the tension about my observations eased. From the perspective of the boundary games that I am proposing, the situation can be characterised in the following way:

In (7) there is new information, but that information is outside of what is relevant to the boundary that is being discussed. However, the new information does not pretend to displace the old information inside the boundary. The boundary that was being discussed gets strengthened and appears more relevant to deal with the situation by contrast with what was said in (7).

One additional and interesting issue here is that although the new information is not used to overthrow the old one, a new boundary is created. In this case Mark's comments were the base to make other people ***Follow*** and ***Enhance*** the information on this new boundary. At the end this new boundary stood just as a contrast of what is not being pursued.

6.5 Drawing Guidelines for Intervention

As happened with language games in the last chapter, from Relevance it is also possible to derive some guidelines in order to intervene. Some guidelines derive directly from the concept of relevance. First, if we want to have an effect the communication needs to be relevant: possible to connect to the audience's background and requiring small processing effort. Without this intention's roles of helping, making sense of the situations and coordinating the actions of the different actors are hindered.

Additional guidelines derive from the Boundary Games framework just presented. The idea is that in a language game, it is possible, in principle, to affect the boundary in at least the six ways proposed here. Frederick in feedback 2 asked me if those six were families of strategies that they were using, or if they were language games. It can be argued that they work as both. The main idea is that they can be used as a way to read a situation and reflect on the intentions and the effects that actors want to achieve on the boundary.

I have derived two other guidelines which reflect on a situation from which TOP wanted some feedback: the problem of passing each other. It was already explained that TOP was a multidisciplinary team. Their backgrounds involved many fields of knowledge. Consequently, it was common for them to explain to each other some issues, and to feel that they reached agreements on the topics just to discover later that everybody had a different "agreement" in mind.

From the relevance perspective, there is an explanation to this phenomenon. People do not manage just one context to interpret new information. Focusing on the receiver, the idea is that identifying which assumption is more relevant for her/him

requires finding a context for interpretation. “People hope that the assumption being processed is relevant (or else they would not bother to process it at all), and they try to select a context which will justify that hope: a context which will maximise relevance” (Sperber & Wilson, 1995, p.142). The selected context will enable to get the maximum cognitive effects using a minimum effort. The context is not given; it is a variable.

As a result, I can explain some idea, but it is my audience who chooses in which of their contexts it makes sense for them. For that reason, you can have a situation in which everybody said that everything is clear, that they are connecting what has been said to their background. The problem is that we do not know under which context the ideas are making sense. As Wanda posed in feedback 2, “there is a difference between connection and shared meanings”.

Two guidelines can be proposed to manage the issue of passing each other.

First: follow Midgley and Ochoa-Arias’s (2001, p.641) advice of surfacing “at least two contrasting interpretations of problematic phenomena”. “The surfacing process can and should be enhanced by exploring different possible boundary judgements”. Midgley and Ochoa-Arias are concerned with giving the opportunity to different stakeholders to present their views and address in this way the problem of power relations suppressing voices. It seems to assume that despite the presence of a conflict, the boundaries are clear and no confusion is possible. However, it can be argued another take on this approach from Relevance's perspective.

As it has been explained, relevance is a comparative criterion. Accordingly, it is difficult to perceive the implication of something if there is only one boundary within which to operate. Having more than one allows for contrasting and for a better understanding of their respective implications.

This is not restricted to a particular set of methods. For instance, on the field, Hannah in my first interview (session #22), showed that one of her strengths was to be bicultural. She was western educated but later she studied Māori culture in depth.

She believes that thanks to this double exposure, she could mediate and understand different points of view in the workshops.

Second: combine different boundary games in the intervention. Iteratively changing games make easier to test if everybody is on the same page. If cognitive environments of all those involved are tested when the assumption is explained, connected with others, debated, called into attention or with its emphasis shifted, it becomes easier to accept that they are on the same page when everybody accepts to be on the same page. It also helps to avoid lucky followings, those interactions in which it seems that people deliver the right behaviour without really understanding what it is behind the ideas.

An additional benefit is that it also makes the process a healthier one. For instance, I witnessed meetings in which the amount of ***Settings*** was very high in relation to other kinds of games. The consequence was that there were no stable boundaries on which to build. Once something was built it was immediately blurred by new boundaries on top.

However, there is a caveat. The idea is not to eradicate the variety of possible contexts useful to understand an assumption. The idea is to realise that those possible contexts are present and in this way improve understanding. The variety of possible contexts can be used then to enrich a dynamic. For instance, in my first feedback I was explaining the difference between constructing knowledge from a written form and in oral form from the literary perspective of Ong (1982). TOP did not stick to my use. They turned those ideas to talk about reporting, emailing, writing articles, articulating the work of the group, and talking about cultural archetypes.

6.6 Boundary Games and Boundary Critique Theory

At the beginning of this chapter it was argued that the most coherent way to understand boundaries with the aims of this research in MS/ST was the work of Churchman, Ulrich and Midgley. Now I will make some reflections on Boundary Games and its possible contribution to Boundary Critique Theory.

Ulrich (1983, p.325) shows that Churchman's work presents a shift in how to conceptualise intervention. "The crucial task then is not one of providing analytic tools such as social indicators, simulation models, etc., but rather dialectic tools to help the planner reflect on his designs, and enter into reasonable discourse with the affected". It can be argued that Boundary Games is a dialectic tool that helps the planner not necessarily to reflect on his design, but with engaging a reasonable discourse with the affected.

The dialectic tool proposed by Ulrich is the Boundary Critique. It "aims to make visible the ways in which any specific claim is conditioned by boundary judgements and how the facts and values it asserts change when the boundary judgements are modified" (Ulrich, 2003, pp.333–334). Boundary Games is not exactly an approach to Boundary Critique. However, it helps to make explicit the modes of actions used to present the claim. It helps to show also the action taken to modify the boundary.

Boundary Games is a tool that potentially can enable the practitioner to have constant reflection on the intervention process. This is an important component of Boundary Critique. Accordingly, to Ulrich (2003, p.337) "The only way to achieve this [reflective practice] is to make emancipatory boundary critique an intrinsic, non-separable part of any use of methods and of any claims to knowledge or rationality". Midgley's (2000, p.129) Systemic Intervention also considers in his approach the need to put the reflection of boundaries at the core: "purposeful action by an agent to create change in relation to reflection on boundaries".

Boundary Games can be used to reflect on the intended effects on the boundary during the actual interaction with the participants in an intervention process. It is proposing new tools to evaluate the situation. To understand how it differs from Ulrich's and Midgley's work let us give a brief description of some of their ideas.

Ulrich (1983) assesses the boundary of a system through twelve critical questions. The questions explore sources of motivation, control, expertise and legitimisation. 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.

Midgley (2000) focuses on the problem of marginalisation. He shows how in some situations, groups that make wider appreciations of a situation have the risk of being marginalised by groups with narrower views. In these situations, there is a primary boundary with valued elements while the elements marginalised are devalued (Figure 6.8). In this situation conflict can arise from the clash of two groups of values.

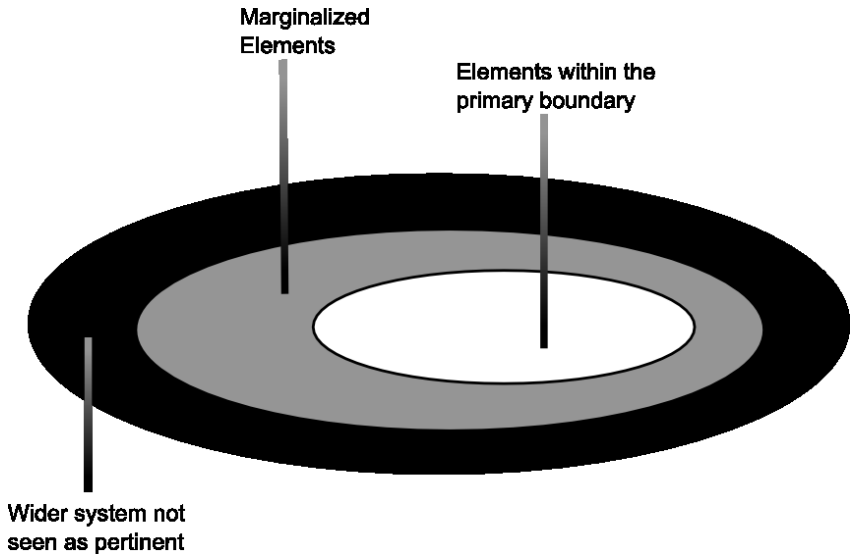


Figure 6.8. Marginalisation from Midgley (2000, p.143).

Although Ulrich and Midgley are advocates of reflecting about the boundaries throughout the whole intervention process, their approaches seem more appropriate for a diagnosis of the situation. It is performed at the onset of a situation and lets you understand where the boundaries of the situation are. The Boundary Games approach provides additional perspectives that are not committed to a certain point in time. Boundary games can show the dynamics of a situation and how, with every communication, the boundary is affected through the whole intervention process. In this regard Ulrich's and Midgley's proposals seem more static.

Another difference is that Ulrich and Midgley seem to "value" some kind of data (e.g., what is asked in the twelve questions) as more important to define the boundary. Boundary Games assume that any kind of data when put into use will affect the boundary. The two mentioned differences give an advantage to Boundary Games to trace what happens in the process. A possible weakness is that the potential amount

of data can be overwhelming. After all it is possible to think about the implications of each word expressed in the context.

Another issue useful to differentiate my approach is the problem of when to stop the expansion of the Boundary. As it was shown earlier in this chapter, according to Churchman, there is not really a final answer for the boundary of the system. For this reason, it is fundamental to question those boundaries in the planning process. Churchman's assumption is that a narrow conception of the problem implies a small boundary. The small boundary is represented by considering a relatively small group of stakeholders and issues. In this scenario, many potentially important issues are left outside, and therefore it is difficult to make sound decisions. The answer to the problem from Churchman's perspective is to "sweep in", to explore and expand the boundary further in order to take into account more elements in the analysis. In this way, more informed and ethical decisions can be reached.

However, from Ulrich's (1983) point of view the way in which Churchman "sweeps in" is problematic because in theory the process of expanding the boundary never ends. Ulrich (1983, p.23) argues that "no theoretical solution to the problem of practical reason can be both critical and practicable. An approach to "rational" planning that is both critical and practicable is thereby necessarily a merely heuristic approach". It is therefore, necessary to stop the "sweep in" process at some point with the aim of practicality.

The Theory of Relevance gives us heuristic criteria for stopping the process of "sweeping in". If the boundary stops being relevant, that is, if with the new "swept in" elements the actors cannot make connections or the processing effort become too big, it will be pointless to continue that route.

6.7 Conclusion

This chapter has proposed a way to understand and look at one of the faces of intention stipulated in Chapter Four: doing things intentionally, the present-directed intentions. This way is based on looking at the effects of communication and as Relevance Theory proposes, it can be assumed then that these effects were intended,

because actors make efforts to make them relevant. Since the effects are intended, they are important for making sense of what different actors are doing and as the conversations develop, fundamental to the coordination of actions.

In order to establish a point of reference to describe the effects, it was proposed to mix the ideas of relevance with the concept of boundary in systems thinking. Boundary is fundamental here because is providing a point of contact with MS/ST and Boundary Critique Theory literature. In this literature, boundaries are connected with the way in which an intervention is conducted and what methodologies are chosen.

Six intentions, operations, games, strategies or ways in which actors can affect a boundary were proposed: ***Setting***, ***Challenging***, ***Wandering***, ***Following***, ***Enhancing*** and ***Probing***. It is proposed that they behave as pragmatic principles, so in general they work in different degrees and can be mixed. It is also proposed that they can be used as a way to describe a dynamic and also to reflect on intervention processes.

Finally, it was shown how the ideas on Boundary Games can enrich Boundary Critique Theory. It provides an approach for constantly reflecting on the effects of each of our actions on the boundary. This approach, contrary to what has been previous in Boundary Critique Theory, shows how any piece of interaction or information can have effects on the boundary. Furthermore, it shows that possible criteria to stop boundary expansion need to take into account limits by the cognitive processing effort.

After presenting one face of intention, the next chapter deals with the other face: future-directed intentions.

Chapter 7 Intending to Do Things

The last chapter explored the first face of intention, "we do things intentionally". I proposed a way to understand the present-directed side of intention based on Relevance theory and system boundaries. This chapter focuses on the second face of intention, the future-directed part: "we intend to do things" (Bratman, 1984, p.375). Additionally, it discusses intention's roles of guiding, sustaining and causing action, roles that were not explored in relation to the present-directed part. As in the last chapter, this is part of the discussion of data and implications of what I found and also combines philosophy, theory and empirical work.

Specifically this chapter is underpinned by two components. The first one involves my experiences during my Action Research involvement with TOP. The second comprises the different philosophical approaches to intention in philosophy of action introduced in Chapter Four: the belief-desire, the pro attitude toward plans, the trajectory of actions and the complex adaptive system.

These two components are brought together through the use of first and second person inquiry (Reason & Bradbury, 2006b). These methodological tools from Action Research allow me to integrate reflections about my intention, other's people intention and philosophy of action. In other words, I was using the knowledge gained in my readings of the field of Philosophy of Action to reflect about my experiences in the field.

This chapter is organised as a succession of reflection cycles. Each builds on the preceding one, expanding the range of ideas comprised by the concept of intention (Figure 7.1). At each step of the process, the aim is to find an approach to understand intention in a way coherent with both, what I witnessed in TOP and about myself. The purpose is to find a notion of intention useful for understanding intervention, taking advantage of the two intervention contexts (me on TOP, TOP on their project).

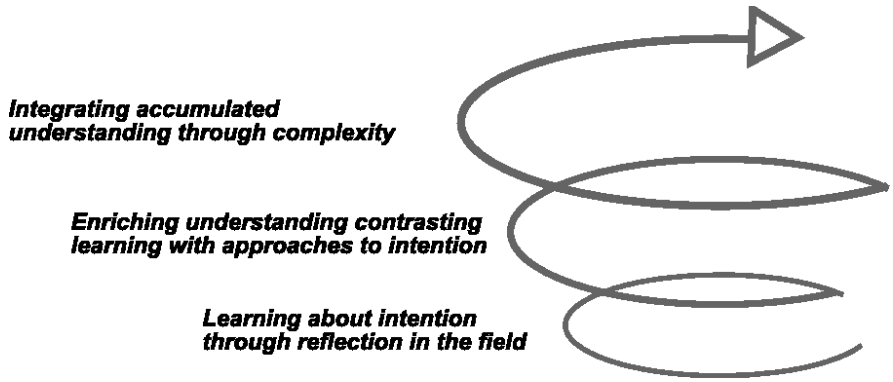


Figure 7.1. Cycles building the understanding of intention.

The first reflection cycle at the beginning of the chapter shows what I learnt about intention through my involvement with TOP. Next, in a second cycle I contrast what I learnt in cycle one, with different approaches to intention in philosophy of action. In the third and last cycle, I show how the different lessons of the preceding cycles can be integrated under the complexity theory approach to intention. Before the chapter's conclusions, some methodological implications for practice and Boundary Critique Theory are presented.

7.1 First Cycle: What I learnt About Intention in the Field

The reflections presented in this section were produced during my involvement with TOP. They represent three issues that I found important for my understanding of intentions: 1) it is difficult to name them, 2) how knowing what you do not want to do, helps to give you a direction and an intention of what you do want to do, and 3) how not acting can also be intentional.

Although realising these issues involved using philosophy of action, I was not looking at the time to challenge the different approaches to intention in this philosophical branch. It was more about learning the vocabulary of the field and using it to describe and reflect about different experiences regarding intention.

Because I used first and second person inquiry during my fieldwork to reflect about intentions, the data comes from two sources. On one side, I was the research object, I was experiencing situations and reflecting about the role of my own intention on them

through my involvement with TOP, especially on my feedback to them. On the other side, I witnessed how TOP engaged with their project process. This allowed me to reflect about their intentions through their interactions in their meetings but also during my interviews, and in their reactions to my feedback.

The issues presented in this first cycle are not resolving the issue of how to understand intention. However, in the light of my experience, these issues need to be explained for meeting the purpose of finding an approach useful for MS/ST intervention.

7.1.1 Sometimes is Difficult to Know What Do You Intend

I started the inquiry of how my intention was shaping my actions in the field under the assumption that identifying a concrete intention for the actor performing the action in a situation was easy. However, both my own reflections and TOP's testimony point out that this is not always the case.

Although this situation looks similar to that described in Section 4.2.1, there is a big difference. There, it was about how for an observer is difficult to define if an action was intentional. Here is the very same actor embedded in the situation, the one that is having the problem knowing what her/his intention is.

How I arrived at this conclusion is shown in three parts. The first one shows the process of inquiring about my own intention. The second looks to contrast this with TOP´s views. The last one deals with the implications that the difficulty of identifing intentions has for the research.

7.1.1.1 Looking to Figure out my intention

As an aid to help me with the understanding and identification of intentions, I developed a checklist of categories derived from philosophy of action as mentioned in Section 5.6.1. The categories covered issues and factors that some authors saw as basic constituents of intention, or that they were helping to propel, define or hinder those intentions.

I applied the checklist to reflect about my intention, especially before and after my second and third feedback. One of the things that I was looking for through this process was to understand more clearly what my intention was. I considered these research events ideal for the purpose of clarifying intention. I felt that I could be more focused on thinking about my intention. This was so, because by that time I was already settled in the field, and I felt that thanks to the experience gained in the first feedback, my awareness towards the concept of intention was more developed.

I found two approaches to intention particularly attractive to help me define my intention: The belief-desire model and the pro attitude to plans. Based on them I derived categories such as belief, desire and plans.

Trying to clarify intention by the way of belief and desire is assuming, as this approach does, that intentions are reducible to these more basic concepts. In myself, I identified some basic desires such as: working for my identity as a researcher, receiving feedback on the ideas presented, and looking to improve their practice.

When trying to couple it with the accompanying belief I got into trouble. The very question puzzled me, and I could not find how to articulate an answer. This is problematic because without an accompanying belief, desire is not much use. It is the relationship between belief and desire that propels the intention (Davis, 1997). Belief offers a confidence condition, that your action will mark a difference (Mele, 1997a). In the absence of this condition, from Enç's (2003) perspective I was not intending but merely trying.

In addition, I considered that my desires were quite vague, not at all useful to guide action. The problem of how to manage the feedback to TOP involved some complex situations, and I could not see how the vague desire and unknown belief could be sustaining or producing my actions through this. This makes me accept Bratman's (1987) critique, stating how the interaction between belief and desire is insufficient to manage complex issues.

When considering the concept of plans, the situation seemed on firmer ground. However, was I planning? With regard to plans, I can mention my research

methodology (Chapter Three) and more specifically the preparation of some guidelines for my feedbacks. I saw them comparable to a plan. The guidelines were loosely indicating the points that I wanted to convey, some possible criticism that TOP could raise, as well as my counter arguments, and also a list of situations that were better to avoid.

My guidelines were useful and not rigid. The fact that they were not rigid does not pose a problem according to Bratman (1987). He understands that plans constantly change at both the micro and the macrolevel. This matched my experiences. For instance, regarding the microlevel, in the middle of the feedback, prefigured sections for the session were renamed, erased or created according to what I perceived as the needs of the session. Furthermore, at the macrolevel, especially at the beginning of my involvement, I formulated overarching plans that changed or disappeared according to the demands of the context.

However, having the plan in front of my eyes and asking myself about the intention in it was again not helping me to understand what could be my answer. Later, in a more careful reading of Bratman, I realise that he was not really equating a plan with intention. He was pointing out that intention is something that is compelling you to carry out your plan. This put me in despair about the possibility of finding out about my intention.

Additionally, plans did not seem suitable to explain all my actions. For instance, on some occasions I acted impulsively without a plan. For example, when TOP was preparing workshops for the subproject on water caring, they were making contradictory demands about my participation. I felt that some of the people in the group were asking me to participate actively giving ideas. However, I also felt that some people were opposing this. I never consciously took a decision of what to do about this tension. Yet, in one of the meetings without mediating a plan, I felt an opportunity to speak up on the topic, and I expressed my discomfort.

There I just acted even to my surprise without visible connection to a plan. Under Bratman (1987), because I did not plan to follow a plan I was not acting intentionally.

Nevertheless, I felt that I was acting coherently with let us say in the absence of a better word with myself.

Another issue that bothered me was that there were cases in which I defined a plan. I believe on it, I wrote about the way in which I was going to follow it, I was convinced that I was going to follow it, but at the end nothing happened. I found later that this case was already mentioned by Mele (1992). However, it was still a puzzle not understanding why this could happen.

I tried to make sense of all the aforementioned reflections to understand my intention. However, I went more confused. The situation was comparable to the story of a centipede trying to understand how to manage all its legs and getting so confuse that was unable to walk. Adding elements to think about intention seemed like extra legs to take care about.

The problems understanding my own intention led me to think that perhaps I lacked the rigor or clarity of mind to really understand my intention and the concepts surrounding it. As a way to cross check my feeling and doubts I turned to TOP's take on intention.

7.1.1.2 TOP's take on Intention

I focused on TOP's preparation of workshops for the Evaluation Case Study. The work that I saw was a very conscious one. For instance, before starting their engagement, they devoted four meetings to plan their involvement. These meetings covered a wide range of issues such as defining purposes, choosing the participants, the tools and conceptual underpinnings of the work.

However, when asked on the interviews about beliefs, desires and plans, they also experienced difficulties identify them. A huge difference thought, is that while I was hoping to make sense of these concepts in relation to their work, they were sceptical about their impact or even presence.

For instance, Frederick could not see his intentions affecting his actions. He questioned whether intentions were something at the level of the actor, or it was a social phenomenon. He joked in my second interview that perhaps his difficulty to identify his intentions was due to being a "sloppy thinker" (session #48). He even half joked saying that the only intention that he could identify was to avoid embarrassing himself.

Dianne's stance went beyond that. At the end of my second feedback she suggested that the work that they were carrying out was not intentional but "ad hoc" (session #41). Furthermore, she complained frequently about the lack of rigor in their research. I understand this last comment not as a statement that they were not actually preparing for the workshops, but as a manifestation of her dissatisfaction with the difference between what was planned and what was actually performed. The plan was not working.

7.1.1.3 Implications

I am not discarding the possibility that on some occasions you can be clear about your intention. However, overall, in my involvement neither I nor TOP was clear about intention after reflecting on the categories drawn from philosophy of action. How was I to make sense of this? I considered three possibilities.

Perhaps it was a problem of sloppiness just as Frederick suggested about himself. Perhaps this was also applying to me. However, I resisted that interpretation, especially for two reasons. First, because I saw how much effort TOP was applying to prepare the meetings. Second, because my own feedback to TOP was seen as useful by them and although the issues that I used for it were very likely to produce conflict, I was managing to avoid it. My actions were definitely not random.

The other possibility was that, after all, naming or recognising an intention is not an indispensable characteristic of the phenomenon. At the time in which I was contemplating the issue, I was not aware of literature supporting this idea. However, much later I discover that Gibbs (2001, p.106) warns us that the notion of the content of intention as something that "must be mentally represented" is problematic.

However, if you cannot identify what intentions are, how can it be said that they are guiding, sustaining and causing action? How can you intend to do something? In fact, how actors can make a difference in an intervention process? The next section starts to give hints about how that can be possible.

7.1.2 You can Intend to do Something by Construing What You Do Not Intend

The difficulties in realising what my intention as, described in the sections above, put me on the path of disbelief about my own research for a while. However, I started to see a different path for the research thanks to something that I observed in the changing relationship between TOP and its Advisory Group.

In a nutshell, it was the issue of how they were avoiding certain paths of action. Although different from intending to do something, intending not to do it was in my perception definitely intentional. I have divided the discussion of this, describing first the situation at TOP, next introducing an interpretation using Philosophy of Action, and finally exploring some implications.

7.1.2.1 The situation

In Chapter Five, the Advisory was presented as a group of people advising TOP about ways to make their research more useful and relevant for New Zealand. This was, in fact, how Mark saw its role previously to their formal interaction with them. However, the nature of the relationship changed after the first Advisory session at the end of 2005. Although I was not yet based at TOP's town, my second visit to TOP coincided with their preparations for the first meeting with the Advisory.

Most of the preparation time was used on discussing the nature of their relationship with the Advisory, not on the actual preparation for the meeting. When they first confronted the Advisory they saw an Advisory conceiving its role as monitoring. Additionally they saw a group of people drive by strong interests. TOP was not prepared for an engagement on those terms. What happened inside that meeting is not

clear for me, but I have the impression that TOP was questioned on some key points, and at the time they were not ready with answers.

It felt as though after the meeting TOP's standing weakened in the eyes of the Advisory, threatening in the worst-case scenario to make TOP lose control over their research. One of the consequences of this "failed" meeting is that since then, every encounter with the Advisory required several meetings to plan, rehearse and revise the session.

It was even suggested changing the nature of their relationship with them. In March 2006 (session #8), Frederick, for instance, suggested "I mean why we cannot consider working with the Advisory as an intervention?" The idea was accepted without problems. However, when it was first suggested before the "infamous" meeting in 2005, the very same idea was emphatically rejected.

From the overall situation, I want to focus now on the preparation of presentations for their meetings with the Advisory. The dynamics were simple. Someone in TOP worked out a presentation, usually accompanied by some slides. Afterwards, this person rehearsed the presentation while the rest of the team commented on it. There were comments ranging from the merely aesthetic to the theoretical and philosophical. Some of the comments were concerned about the possible reactions of the Advisory to the content of the presentation. They even explored different reactions leading to positive and negative scenarios.

In many cases, the protagonists in these scenarios were named. This allows them to consider the background of those persons in designing careful wording of the ideas presented. They were aware that some terms could guide people inferences in undesired directions and contexts. As a result, they were careful to shape their actions to direct the Advisory inferences in a favourable direction for TOP's research.

As can be inferred from my last paragraph my first approach to this kind of event was through Relevance Theory. In fact, this kind of event reinforced my confidence in the approach that I took in Chapter Six. However, it also made me reflect on a concept in philosophy of action: wayward chains.

7.1.2.2 Avoiding Courses of Action Or Avoiding Wayward Chains

Wayward chains, as already introduced in Section 4.2.1, is a concept in Philosophy of Action that refers to those sequences of actions or events that deviate from the prefigured course that the actor has in mind. Regarding TOP presentations to the advisory, it is useful to consider the differences between Figure 4.1 (wayward chain) and Figure 7.2. Here two important differences can be seen. The first one is the timeline. In traditional wayward chains (Figure 4.1) philosophers are discussing based on past events if the outcome was intentional. In Figure 7.2 TOP is engaged in the process of predicting reactions to the presentation. They are thinking about the future.

The second difference is that in Figure 4.1, the outcome was the same for both chains of events. In Figure 7.2, there are different deviations (black and red), and people are concerned with those deviations pushing TOP's research to different undesirable grounds. In many cases, the action triggering the wayward chain was removed or adapted to avoid the problem. The process that they were carrying out is simplified in Figure 7.2. The real process involved the exploration of many possible branches and sub branches.

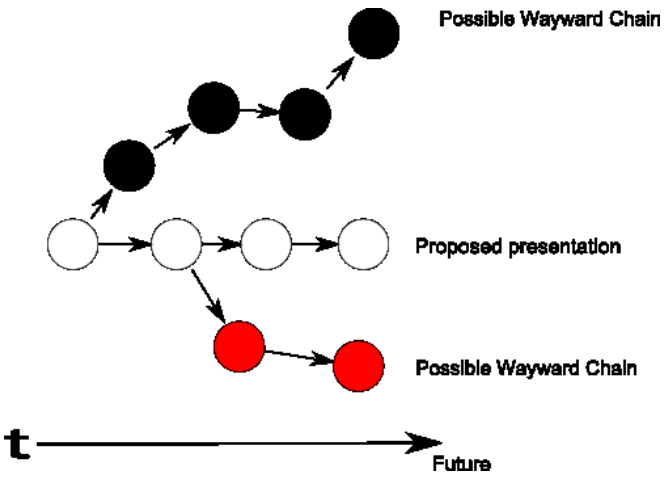


Figure 7.2. Presentations and possible wayward chains.

7.1.2.3 Implications

In relation to intention, two aspects of these wayward chains and deviations were important for the development of my understanding. First, although for the team it was difficult to understand what they were intending, they did not have problems recognising the risk involved in the deviations. Fiddling with their planned actions in order to avoid those undesirable chains was for me evidence of an intention.

Second, when they were exploring the wayward chains, they seemed more able to guide and control the course of actions. Usually if they were not exploring those deviations, once in the field it was more difficult for them to know how to react to changing conditions. For instance, TOP's first meeting with the Advisory is a good example of this. In later meetings, when a great effort was put on rehearsing and polishing the meetings, and exploring possible deviations, negative experiences were minimised.

As was already explained guiding and controlling are aspects associated with the role of intentions. In a way actions in which different chains of actions were explored seemed more intentional. They were not sure about where to guide events, but they constrained the situation avoiding undesired directions.

I applied what I saw in TOP for my second and third feedbacks. In fact, the wayward chains of actions become part of my checklist of reflections before delivering the feedback. I was making myself aware of potential deviations and how they could jeopardize my deliveries.

I think that this kind of preparation helped me to react fast when I saw problems in how people were interpreting the content of my presentations. Additionally it made me more aware of how certain group's moods and how previous events in the meetings could be problematic for the content that I was looking forward to delivering in my presentations. In those occasions, I constrained myself and cut or adapted potentially problematic content on the move.

7.1.3 You Also Intend when You Decide Not to Act

Intentions are a powerful explanatory device, and they are such because we attribute them causal power (Davidson, 1963; Enç, 2003; Risjord, 2005). Consequently, an important body of work in Philosophy of Action centres on how intentions produce actions. Not much work is done on how intentions can be present on non acting.

However, my reflections on events in the field led me to consider inaction as an important part of the intention puzzle. Two cases were particularly clear to me. The first case refers to the delivery of my first feedback. In it, partly because of my language games framework, partly because of my limitations of language and knowledge of the context, I was giving very short explanations on issues, and I was letting the participants elaborate on those explanations.

I only intervened if the person elaborating at this point deviated from the ideas that I wanted to communicate. If their elaborations and inferences matched what I wanted to convey, I did not bother to interfere. I thought that it was even more convenient if they could explain, follow, and elaborate the ideas among themselves. In a way I was intentionally not acting here.

My second case, already introduced in Section 5.3.2, makes reference to the space allocated to my feedback. According to my arrangement with TOP, my feedback was to be delivered in their reflective sessions. However, after my first feedback, people were not allocating time for this activity so basically this kind of session disappeared.

I did not mention to the group the fact that with the sessions the space for my feedbacks also disappeared. I decided not to act. I did this because I felt that the situation favoured me. I did not want to risk the success reached with my first feedback, and around that time I was struggling with many doubts about the concept of intention. My decision can be judged right or wrong but the important fact in this argument is that TOP seemed unaware of the fact, and although I was aware of it, I remained deliberately silent. It could be argued that deciding to remain silent is a kind of action.

However, it can also be argued that my intention was not producing or causing any movement. This is problematic because most of the Philosophy of Action is based on the idea that intentions have causal powers. However, Frankfurt argues that "Despite its popularity… the causal approach is inherently implausible and that it cannot provide a satisfactory analysis of the nature of action… From the fact that an event is an action, in my view, it does not follow even that it has a cause or causes at all, much less that it has causal antecedents of any specific type" (Frankfurt, 1997, p.42).

To illustrate the idea, he proposes a case that resembles my experiences. "A driver whose automobile is coasting downhill in virtue of gravitational forces alone may be entirely satisfied with its speed and direction, and so he may never intervene to adjust its movement in any way". (Frankfurt, 1997, p.48).

This position raised another question for an approach to intention. Asking about the role of intention on intervention seems to imply that you need to perform some action in order to produce some effect. How then can one describe an intention accomplishing something when we are not performing any action?

7.2 Second Cycle: Enriching what I learnt about Intention through the Philosophical Approaches

Having outlined some issues that I found important to understand intention, the set is ready for the second reflection cycle. In this cycle, I am questioning the explanatory power of some of the approaches to intention in philosophy of action, using the learning in the first cycle to test it. Additionally, I am looking for characteristics in these approaches that could enrich our understanding of the concept.

The approaches to intention used here are the belief-desire, trajectories of action, and the pro attitude toward plans. The issues used to test them are: why intention can work even when we cannot name it, why exploring possible deviations make our actions more intentional and why it is possible to have intentional inactions. The section finishes showing how the need to find a way to integrate all the seemingly dissimilar observations arose.

7.2.1 The Belief-Desire

In order to work under the belief-desire model, it seems that intentions need to be clearly defined. Its reductionist approach relies on defining belief and desire and explaining their interrelations. It requires a degree of awareness of what is the intention or at least their constitutive elements.

Although the literature on belief-desire was useful to make me aware of the concept of wayward chains, the treatment of such a concept is aligned with the difficulties to explain intentional action. This opposes my approach to the concept as something useful to explain that intention can be present even when you are not clear about the direction of your actions.

On the final issue, the biggest obstacle is how the belief-desire approach assumes intentions endowed with a Newtonian causal power. Intention hits something to produce action. Under this light, there is no way to consider inaction as something guided or produced by intention.

However, although this approach does not fare well against the "test", I could not rule out belief and desire as factors having a role in intention. Although I doubt that they are essential to it, if they are present I cannot see how to argue against the idea that they are helping to guide and sustain our actions.

7.2.2 Courses of Action

In the first instance what most attracted me from this approach was its claim of being based on Wittgenstein's philosophy. It states that intentions are not really mental states. They are really a way in which we talk. Intentions are statements on the "course[s] of action which one has adopted" (Scheer, 2004, p.121). Additionally, Scheer argues that if they are a way to talk, they do not have causal power.

Now I will show how this particular way to conceive intention fares in the light of what was learnt in the first cycle. Because it is a way to talk it requires a way to name those courses of action. Consequently, they will not work if you cannot name them.

You can develop the histories around them, but because there is no causal power on them, they cannot sustain an action. However, not having causal power curiously means that they will not have any problem handling inaction.

Regarding to how actions can become more intentional when we know what we do not want to do, this approach seems indifferent. Perhaps talking about what we do not want to do will make clearer the description of what we want to do. However, because the direction of what we want to do is already there, the role is merely clarifying.

My biggest difficulty with the approach is Scheer's rejection of the notion of causal power. Without it, they cannot cause, or sustain the action. Consequently, from this perspective it is difficult to see how the actor can intervene in the intervention.

What proves very compelling in this approach is the way to talk about courses of action. It is indeed a powerful image and its influence can be perceived in some of my arguments (e.g., in relation to wayward chains).

7.2.3 Pro Attitude toward Plans

Again, using what I learnt to discuss the approach I can start by saying that, in principle, intentions cannot be named because they are pro attitudes. They act as a compelling force to carry out a plan. However, the prominent role that plans take in this approach gave a way in which some clarity about what is pursued is needed. Although Bratman (1987) suggests that plans can be very vague, nevertheless, they have an aim that requires a certain level of awareness.

The case of how deviation can make actions more intentional can be explained in terms of reasoning and practical reasoning (refer to Sections 4.2.3.1, 4.2.3.2 and 4.3.1). This process is the one leading to the refinement of plans. So it just a matter of

considering possible chains and rejecting them, helping in this way to define better plans. Although this argument is not present in the surveyed literature about the topic, practical reasoning seems a way to construct one coherent with the approach.

That sometimes actions are not needed and, nevertheless, the situation is still under "control" of an intentional process can be explained by the coherence of the events with the overall web of relations. If the events are coherent with it, there is no need for action.

As a whole, this approach fares reasonably well against the issues found in cycle one. However, there are some problems regarding plans, as I explained before. One is that having a plan, believing that you will apply it is no guarantee that it will be used. Additionally, there are actions that do not seem connected to any plan.

On the bright side, the approach has a very attractive characteristic, the idea of a web of relations interacting to give coherence to the plans. This opens a way to consider that factors such as belief and desire among others could have a role to play with intentions, and, in fact, this idea led me to change my initial methodological approach to understand intention as the next discussion shows.

7.2.4 From Discarding to Integrating

Before and during the first months of my involvement with TOP, my idea was to falsify approaches. It was to come out with some ideas based on the literature, look if they were matching what I was seeing in the field and then discard the ones not useful for my purposes. This approach worked well in relation to the boundary games presented in Chapter Six, but confronted with the problem of this chapter the strategy changed.

As the preceding discussion shows I could not fully discard any approach. For instance, the categories that I developed to reflect on intention were proving not to be a way to falsify some of them, but a way to see that all of them could be applied in some degree.

Additionally, thinking about intention in relation to plans was introducing the concept of a web of relations, and how intention role was to reinforce the coherence between the elements of the web. Consequently, I started to think that the issue was not how to get rid of the different characteristics that I was finding on my way but perhaps how to integrate all of them under a coherent approach.

Obviously, my first candidate to integrate all the elements was Bratman's approach. The aforementioned problems with the approach seemed workable. However, near the end of my involvement with TOP I went to discover the approach to intention involving complexity theory. Potentially this approach could cover what I saw as the good characteristics in the planning approach. Interestedly, this approach, although drawing from Philosophy of Action was also drawing from systems concepts (complex adaptive systems), something closer to my field of contribution Management Science/Systems Thinking.

Additionally, reflecting on Garfinkel's (1981) idea that different theories sharing an object at the end are dealing with different questions, led me to see a difficulty with using Bratman's approach for my research. One of the reasons for which I consider my research important is the possibility of being more creative and flexible when tackling an intervention. However, I arrived at the conclusion that Bratman was considering a problem not compatible with my search, the question of how intention enables us to carry out complex actions.

Bratman's approach shows how intentions help me to carry out a plan. For example, in the case of an intervention, a methodology can be conceived as a kind of plan. Then the pro attitude that is compelling action explains how practitioners can carry out the process of applying the methodology. It is ensuring the execution of the plan. It is not about being creative and flexible. This diverges from my purposes.

For this reason I moved from Bratman. In the next section I will explain how the complex adaptive system of intention deals with the issues so far introduced in this chapter in a more coherent way with my purposes.

7.3 Third Cycle: Integrating What I learnt from Theory and Practice under the Complex Adaptive Systems View of Intention

This section deals with the different issues that arose from the previous two reflection cycles. It is about integrating what I learnt from the field, with what I learnt from contrasting this learning with the different approaches to intention. It also deals with the issue of how to show in which way intention can affect an action and from there to have a way to show how methodologies can also be affected.

The proposed way to answer these issues is by understanding intention as a complex adaptive system. As introduced in Chapter Four, this approach relies on seeing intention as an emergent phenomenon based on circular causalities. These circular causes work then as self-causes that constrain the possibilities of actions open to an actor. Guidance is provided by the emerging system constraining the trajectories.

We as observers do not identify an intention directly. We identify the courses of action emerging from the web of relations. Making sense of this trajectory is what we use to give meaning and coordinate our actions with others. Here this approach is coherent with Scheer (2004) and his courses of action. However, his courses are consciously taken, while here they are emergent.

One interesting point is that based from the arguments, there are two ways to describe intention: emergent courses and emergent web of relations. Talking in terms of course as Sheer does make it easier to integrate intention inside of practical reasoning's chains (e.g., when you elaborate towards a goal you give a direction). Talking in terms of web helps us to identify how different elements reinforce each other.

This section first shows how characteristics from other approaches (cycle 2) can be integrated under the complexity approach. The way in which they are integrated adds ideas about the nature of intentions. Next, the issues raised in cycle 1 are explained. Finally, it is shown how this approach explains how actions can be affected by intention.

7.3.1 Intentions as Emergent Webs of Relations: Taking Account of the Second Cycle

Perhaps one of the big difficulties when we are thinking about intentions is the idea that we can pinpoint an exact cause that is producing action, just as when we use a reductionist approach to intention such as the belief-desire model. Juarrero (1999) blames this situation on our understanding of causality in linear terms. She proposes moving our understanding from collision-like causes to multiple circular causes arranged as loops and acting as constraints.

Using the idea of linear causality, the cause for action can be only one. Juarrero's approach allows multiple causes. Circular causes can constitute a web, like the web of relations proposed by Bratman (1987). Inside the web multiple reinforcement loops can coexist. Consequently, it can be argued that multiple factors, derived from other (and even different) approaches to intention such as belief, desires, plans, or skill can be part of the web.

These factors can then support each other enabling sustained action. Furthermore, their joint dynamic works as an attractor bringing inside new elements or factors. In fact the elements included reach out of our bodies (Juarrero, 1999) and include other people. In this way, the intention is propelled further.

One consequence of understanding intention in this way is that intentions do not appear fully formed. Webs can be very weak at the beginning and their interactions can be merely fortuitous. It could take a while for them to gain strength and transform in second order contextual constrains, that is to say, it takes a while for them to be in a position to constrain and direct actions.

This can help to explain something that puzzled me about my experiences in the field. Take, for instance, occasions in which I had a plan, I believed in my plan, and I had the desire to follow the plan. However, nothing happened. Furthermore, there were occasions in which I did not recognise important pieces of information in my interactions with TOP when I heard about them for the first time. It took me time to rediscover them.

I think now that the problem was that the elements of the web were not yet reinforcing each other, the web was weak. It took a while for the intention to take off, to stabilise, and to get a direction. Once there is a direction, things become to be recognisable. It becomes easier to fit elements into the web. While there is not a direction, behaviour will be pulled by many possible attractors or webs at once (Morgan, 1997).

That intentions are not fully formed when they appear but go through a process of development seems to go against the other approaches in Philosophy of Action. Even Juarrero (1999, p.5), when she uses information theory to conceptualise "actions as unbroken trajectories" where information flows from intention to behaviour, seems to imply this idea.

7.3.2 Dealing with What I learnt on the First Cycle

How can intentions achieve something if we cannot name them? The key issue about intention in this perspective is not that they have some representation, but that they have the power to constrain trajectories of action. The constraints are self causes that arise from a web of relations. As such there is no factor that is essential for producing the self cause, not even the cognitive component of knowing how to name the intention.

Obviously, this does not imply that it is useless to understand how to name the intention. As an additional factor in the web, surely it will help to propel intentions, constrain trajectories and attract other factors to the web. What it is implied is that having a name cannot be by itself an intention.

How can the exploration and rejection of wayward chains make our actions more intentional? Rejecting wayward chains is showing that the web of relations has the power to constrain the trajectory. In fact, the process itself of rejecting a trajectory is included as part of the web of relations strengthening the intention. Rejecting a trajectory does not require us to rationally know exactly what we want instead. It can be just that it feels wrong (Damasio, 2000). However, later the feeling and the rejected chain can interact to give stronger reasons to reject similar chains. If there is no power

to constraint actions, the web will be so weak that it can be said then that there is no intention.

How can inaction be intentional? Under the idea of linear cause, it is necessary to witness some movement in order to feel the presence of the cause. Consequently, if the cause is present it will produce an event. No cause: no event. However, the cause defended by Juarrero is a constraint. If there are external events, actions or courses of action that fall between the limits of the constraint, there is no need for action. It can be let loose. In fact, intervening can affect the pursued trajectory. As a result, in some occasions it is necessary to be intentionally inactive.

7.3.3 How Intention Can Affect Action

It is important for this research to show how an action can be affected according to the intention. This is necessary to understand how different actors can express their individuality and intrude on the intervention process, despite using the same tools, or perform actions based on the same recommendations or "modes of action" and yet, arrive at different non-standard uses due to their intentions.

Juarrero's approach can explain this. The argument considers how the constraints associate to an intention which becomes manifest through "sudden changes in the conditional probability distribution of component behaviour" (Juarrero, 1999, p.175). In other words, the alteration of the component behaviour is biasing which actions will be pursued.

In the same way, the biasing of behaviour is causing a partition of the space of possible actions. Not every action in the space of actions is available once intention acts. Something is "grouping" the actions towards it. One of the reasons why this is important is because depending on how the space of actions is partitioned, the meaning of the action arises. Two actors can refer to the same action but meaning can mark the difference of their intentions and ultimately how their actions will be affected.

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 explains the concept through 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, or houses.

It can be noted that the meaning of "robbing banks" is not clear until the contrast space is considered. 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 space. This is similar to the situation proposed in Section 2.4.3 where a methodology (SSM) is affected by two different contrast spaces (Total Systems Intervention and Critical Pluralism).

Now, although the idea of contrast spaces seems static (the aforementioned example shows a snapshot of a situation), emergent second order contextual constraints are not. The use of the concept of an attractor and courses of actions shows the dynamic side of the process. Juarrero conceives that actions can be understood as sequences of act-tokens. Consequently, they can be seen as a course of actions. In turn, courses emerge from the second order contextual constraints. Therefore, when actions 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, web, or certain attractor, shaping actions in a certain trajectory or course of action.

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).

One final issue: it is important to note that there is a relationship between contrast spaces and the potential wayward chains. A chain of action in itself is not a contrast space. It is when the chain of action is judged as wayward that we are making a contrastive stress.

The link between contrast spaces and wayward chains gives weight through meaning to the argument that exploring those chains adds intentionality to the actions.

7.4 Drawing Guidelines for Intervention

As happened with language games in Chapter Five and Relevance in Chapter Six, it is also possible to derive some guidelines to intervene from understanding intention as an emergent phenomenon arising from complex adaptive systems.

As I already mentioned in this chapter, sometimes intentions are difficult to name. Consequently, a first guideline is that it pays to narrow the universe of possibilities. This can be done by finding what we do not want to happen. In other words, it is about narrowing the options making the wayward chains explicit. A second guideline derives from considering that intention relies on a web of relations. Accordingly, the trick is how to build a web of relations capable of reinforcing among themselves.

Additionally I see two guidelines deriving from the relationship between intention and meaning: The need to explore alternatives and the need to use guidelines in an intentional way. If there is a lack of alternatives to configure a contrast space, the meaning of the actions will not be clear. Only against a contrast does an intention emerge and meaning can be decided. Here it will be very difficult to know if the participants really agree on the improvement actions to intervene. It is just like the case of the priest and the robber. It is difficult to define the meaning of "robbing banks" in the absence of contrast.

The need to be intentional about following a guideline derives also from meaning. If meaning is not clear, the actor applying methodological guidelines will have difficulties for effectively incorporating elements to the trajectory of actions. Only when there are trajectory and meaning, can intentions in the way of attractors help to sustain the guideline even against unexpected difficulties. If the meaning pursued is not understood by the practitioner, he will not be able to give stability to the process.

To obtain the benefit from a reason or guideline for doing something, the reason/guideline needs to be pursued in an intentional way.

7.5 Contrast Spaces and Boundary Critique Theory

Boundary Games, the approach explained in Chapter Six, helps to make explicit the modes of action used to arrive at a situation and are good at showing the dynamics and fluidity of boundaries. However, they do not seem so useful to "make visible the ways in which any specific claim is conditioned by boundary judgements and how the facts and values it asserts change when the boundary judgements are modified" (Ulrich, 2003, pp.333–334). Although, boundaries were not mentioned in this chapter, contrast spaces the aforementioned approach, provides a way to explain how the conditioning of claims works and it helps to show further ways to understand boundaries.

Ulrich's tool for examining how claims are conditioned by the boundary makes use of a contrast. His questions (as explained in Section 6.6) contrast an "is" with an "ought". This can be expressed using the idea of contrast spaces in Garfinkel (1981), as was explained in relation to intention as a complex adaptive system. However, as was shown in this chapter, the notion of contrast space is not limited to "is" and "ought". It can encompass more types and not only dyadic comparisons (just remember the banks, shops, and petrol stations in the case of the robber). What is more, it could be possible to find that the people involved on a situation can agree on the "is". Nevertheless, the "is" can be subjected to different contrast spaces effectively meaning that the "is" is different to all.

Analysis using contrast spaces can provide different insights in a situation. For example, let us see Midgley's (2000) problem of marginalisation through the lenses of contrast spaces. First from Midgley's diagram in the previous chapter (Figure 6.8), all that is considered in the primary boundary is included/seen by the group of people making the distinction of the secondary boundary.

However, from a contrast spaces' perspective (Figure 7.3), people make choices based to the contrast spaces involved. This leads to thinking that if they set for a primary boundary it is because there is a contrast space that supports this decision. What is likely is that people on the secondary boundary also took the decision based on a contrast space. Even so, what is on the contrast is excluded from the boundary. It is there just to give the meaning, but they are not the elements seen as pertinent.

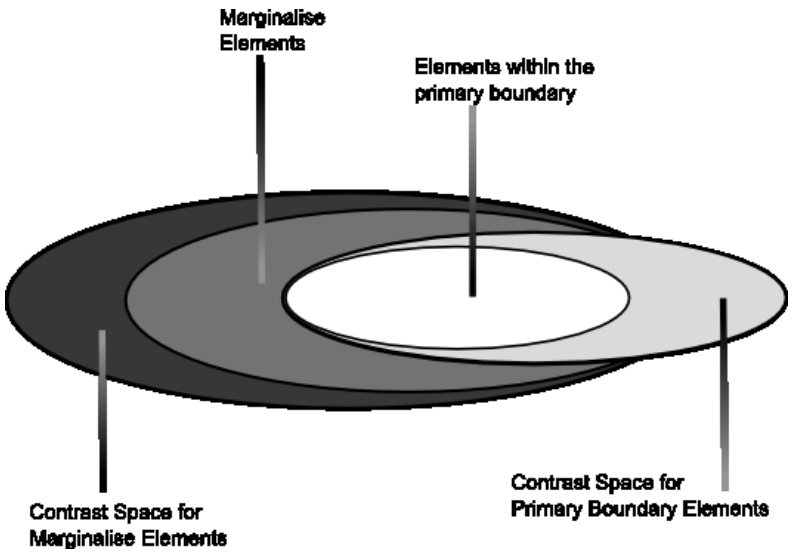


Figure 7.3. Marginalisation using contrast spaces.

This kind of analysis has yet to be tried in practice, but it seems to illustrate possibilities for exploring conflict from a different angle. It has the potential to provide new methods to make visible the ways in which claims are conditioned.

7.6 Conclusions

This chapter builds the case that the future-directed face of intention, the one dealing with how we intend to do things, can be understood as a complex adaptive system.

Therefore, intention emerges from a web of relations reinforcing each other as circular causalities. These circular causalities in turn constrain the possibilities for action, guiding and in a way causing action. Instead of talking about intention as something sustaining action it can be said instead that if the web of relations cannot sustain itself, it cannot be called intention. These are fulfilling the roles of intention not covered by the present-directed intention as shown on Section 4.3.2.

Because intention is underpinned by a web of relations, it can incorporate characteristics from other approaches. Belief, desire, plans, skills and so forth can be attracted and accounted for by the web. In fact, the web can extend even beyond the body and include social circumstances. Because intentions are emergent and act as constraints, it can be explained how intention can work even when we do not know what we want, why choosing what not to do helps us to build what we intend, and why we can move towards our aims by not doing anything at all.

Additionally, thanks to the notion of contrast spaces it is possible to see a way in which action and meaning are affected by intention, giving actors space to intrude on the intervention. Contrast spaces can also be a potentially useful notion for Boundary Critique Theory and help to understand how facts and values are conditioned by the intention/contrast associated to a boundary.

After explaining the second face of intention, the next chapter looks for ways to integrate this face and the one explained in Chapter Six. The idea is to provide an overall framework to explain intention on interventions.

Chapter 8 Entwining Explanations of Intentions on Intervention

> An important form of justification is the uncovering of mutual reinforcements between paradigms, when the aims and goals of two different modes of operations appear to be in harmony, or sympathy, with each other's philosophical and/or ideological aims. (2001, p.124)

The past two chapters of this thesis explain two different ways to conceptualise intention, corresponding to the two faces of intention in Bratman (1987; 1997). In Chapter Six, the present-directed face, intentional action, is underpinned by Relevance theory. In Chapter Seven, the future-directed face of intention is underpinned by Complexity theory. These chapters also explore how intention affects actions and therefore offer ways to study them.

The purpose of this chapter is to combine the aforementioned faces of intention. It uses the concept of interventions as language games as proposed in Chapter Two to underpin the combination. Furthermore, this chapter also shows that it is possible to use Garfinkel's (1981) ideas to consider the two paths of explanations as different levels of explanation. I argue that in this way it is possible to obtain a better understanding of the process of intervening. Part of this argumentation relies on an illustration in which I use both levels of explanation to follow part of TOP's work in one of their projects.

8.1 Two Threads/Faces of Intention

This thesis has presented two threads of argumentation about intentions. They offer different answers to the support questions: what is intention? And, how those intentions can be studied in intervention? Based on the idea that intentions are a two-faced phenomenon, both questions have two answers. From the four answers, two of them refer to the present-directed face of intention, and two refer to the future-directed face of intention.

Chapter Six deals with the present-directed side, using Relevance Theory and understanding the effects of intention in relation to how the boundary of what is

considered relevant in a situation is affected. Chapter Seven deals with the future side, approaching intention as a complex adaptive system where emergent courses of action are affected and constrained by contrast spaces and meanings.

Although the answers presented in Chapters Six and Seven have different foundations, they share something in common: they deal with language and actions. Chapter Six deals with actions in language that affects boundaries of what is seen as relevant. Chapter Seven shows how intentions affect the meaning, by the way in which the space of actions is partitioned. This process in turn constrains the emergent trajectories of actions. Both approaches deal with language and actions, and additionally they show how language can be used in different ways. With the use of language affected, meaning is affected too. These ideas and consequences connect the approaches to intention with the notion of Language Games in Wittgenstein's philosophy presented in Chapter Two.

Now, if the ways to consider intention can be applied to Language Games, they also apply to intervention and the tools used there. It was already argued that the interactions in the intervention setting as the different tools used in an intervention can be conceived as Language Games. From there it also follows that if the answer to the supporting question of how to study the effects of intention applies to Language Games, then it can be applied again to the intervention, and the tools used.

Consequently, the questions about how actors' intentions intrude interventions have two answers. In the first one, intentions as a communicative intention or intentional action look to cause specific effects on the boundary of what is seen as relevant in the intervention process. Setting, Probing, Wandering, Following, Challenging and Enhancing are the effects towards which the tools can be intended.

In the second answer, intentions are complex adaptive systems. Here the meaning or use (following Wittgenstein) of the methodology is constrained and attracted by the meanings derived from the contrast spaces and the emergent courses of actions. Both answers are illustrated in the next section through an empirical case.

8.2 Intention on Intervention: An Illustration

To illustrate how to study intention according to the concepts presented, I will focus on one of TOP´s case studies, the one about Evaluation. As was introduced in Chapter Five, the purpose in this case was to help evaluate the achievements of the groups that the regional council supported to take care of water resources, the Groups for Water Caring (GWC).

TOP´s subgroup responsible for this case used Soft Systems Methodology (SSM) to assist with the purpose of evaluation. What follows is an account of the process of deciding for its use, and the process of deciding how to use it, from the point of view of both faces of intention.

Consequently, I am arranging this illustration in two parts. The first shows how methodology and other elements were used intentionally as tools to affect the boundary. This is important because this was not shown in the previous illustration in Chapter Six. Here, I am following actions in session #38 in which the group discussed how to conduct a workshop using Soft Systems Methodology (although this label was not used at this time).

The second part of the illustration looks at the analysis of intentions through the concepts of contrast spaces and courses of action. It is shown that this kind of analysis helps to clarify what kind of use (in Wittgenstein's sense) is given to SSM. This requires going back to previous meetings and tracking elements of the trajectory of actions looking for the contrast spaces made by TOP's participants.

8.2.1 Intentionally Affecting the Boundary

TOP referred to session #38 as "nitty gritty". This was the third and last of a series of meetings for planning the second workshop with the GWC. In it, TOP was working based on purposes defined in previous meetings. They were looking at how to translate those purposes into concrete actions to carry out in the workshop. The illustration follows the meeting's conversations in terms of their effects on the boundary, paying attention to methodological elements in it.

In this fragment, TOP's members discuss how to approach the second workshop. This involved discussions on issues such as attendants, resources, programme, and methodology. The session was building on the success of the previous workshop where the GWC concluded that evaluation was necessary. The purpose of this second meeting was to find ways to carry out the evaluation.

Attending the meeting were Hannah (the person coordinating the project), Frederick (the expert on methodologies), and Dianne the Māori researcher. My role as always was to discretely observe. What follows is the analysis of a piece of interaction where the methodological discussion gradually takes central place. The analysis is conducted on the same lines as that conducted in Section 6.4.2.

At the start of the meeting, the group is not very clear about the way to proceed with the meeting, for instance:

1) Hannah: "We want to go over the… creating the mental model, the card storming exercise, of desirable positive outcomes…how we are actually going to do that?"

In fact, clarifying this was the whole purpose of the meeting. Although this operation is ***Setting*** a boundary operation, the resultant boundary can be described as weak. It comprises very dissimilar elements and there are no linkages or rules of how to operate the relationships between them.

2) Dianne: "we get some cards"

Dianne responded in the way of a half joke. In fact, she and Frederick laughed. There is a weak element of ***Following.*** She is not changing the focus of Hannah's boundary; after all, the focus at this moment is very wide. Additionally, she is also ***Probing*** if this path is a possibility. However, more important is the ***Setting*** of a rule about how to deal with the issue, namely focusing on the physical cards themselves. Hannah does not laugh and instead poses a series of questions about the kind of cards (e.g. Size and colour), and how they were going to manage the material (on the table, board, wall). In this way, she ***Follows*** the rule introduced by Dianne and ***Probes***

asking for elaboration. Dianne and Frederick in turn provide the details that effectively ***Enhance*** the boundary.

The activity of defining the procedural aspects of the workshop continued discussing how to deal with some new attendants for the second workshop. They were concerned about how to manage a group where original participants and newcomers were mixed. They discussed how to provide a role for the new people and how the ***Think Piece***, a method use by TOP, could be used to that aim (the ***Think Piece*** is explained in Section 8.2.2.2). All these operations involved defining procedural aspects for the meeting. They drew from the original boundary through ***Setting*** new rules, as well as performing ***Followings***, ***Enhancings***, and ***Probings***.

At some point, they deviated from considering the actual workshop and started to talk about possibilities for future research through the people that they were meeting in the workshops. This was effectively ***Setting*** a new boundary not related with the procedural aspects aforementioned nor with the original purpose of the meeting.

After some minutes, Hannah makes a kind of motion of order.

3) "Anyway that's fine… So match pairs how we do that? No, no match pairs sorry, card storming".

Here she does a ***Following*** of the original boundary strengthening again the need to work on this. This also has the effect of making the discussion about the future research boundary less relevant, ***Challenging*** in this way the deviant boundary.

At this point, Frederick as the person responsible for the methodology comes in. He pointed out that the notion of outcomes is important for the GWC and that this notion links with something that they would potentially evaluate. Here he ***Sets*** a rule bringing together outcomes with evaluation. It refers tangentially to the cards but the main focus now is the problem of how to generate the ideas about the outcomes and what to do with them. Dianne asks if they will choose these outcomes as individuals, ***Probing***, but in a lesser degree leading, ***Setting*** a new direction. Frederick ***Follows*** Dianne on it confirming an individual brainstorming.

In what follows, while Frederick explains his ideas about how to approach methodology, Dianne's and Hannah's interventions repetitively ***Probe***, asking for clarification of the issues. For the aim of brevity, I focus mainly on Frederick's operations.

4) Frederick: "Then you get people to group like outcomes with group like outcomes".

This ***Sets*** a new rule, shifting the last boundary. He mentions then how to move the Post-its® around the flat table ***Enhancing*** the tool box to engage with the GWC. Additionally he ***Enhanced*** the boundary taking elements from the initial discussion promoted by Dianne regarding the cards.

5) Frederick: "When you are happy that all the post it notes are in the correct pile, you say well, how do you describe this big pile...".

Again the operation is shifting the boundary by ***Setting*** rules and changing the focus of the question implied by the boundary. With this scenario, he can now formally start to introduce the methodology.

6) Frederick: "So they [big pile's description] become important outcomes, or purposes, or evaluation potentially"

He is again ***Setting*** a boundary that brings together all the previously dispersed ideas, especially when he introduces the term evaluation that was neglected up to this moment. He is introducing again rules to operate and team up all the issues.

7) Hannah: "so that [the important outcomes] is what you call a mental model"

Hannah was aiming to ***Follow.*** However, Frederick rejects this and in fact ***Challenges*** the unintentional boundary created by Hannah. He then uses the whiteboard to explain in more detail, and ***Sets*** a boundary of what he understands by mental model. After the explanation…

8) Hannah "So after you got the different outcomes, you try to work out what do you need to get that outcome…that need a new sub heading".

Here Hannah ***Follows*** but also ***Enhances*** showing the need for specifying clearly this section to the participants. Nevertheless, this did not change the focus question at this point of the interaction.

9) Frederick: "my feeling is that we drop some jargon, and we called mental model".

This move is odd taking into account that Frederick is the one stating this. Frederick is aware that the SSM calls this a Conceptual Model. Despite this he has been allowing Hannah to call this a mental model. What is more, he is now using reinforcing and validating the term. He is performing a ***Following.***

Next in explaining how to proceed with the model he suggests to look for…

10) Frederick: "what are the things the GWC has control over which contribute to these outcomes"

Again he is joining in one boundary different elements introducing new rules to operate the elements present on the boundary.

Next, Frederick deviates from the topic speculating about the political possibilities of the actors in the GWC in relation to the regional council. After Hannah brings him back to the topic…

11) Frederick: "what system is the GWC setting that produces that outcome"… "You can describe it in terms of what is known as the CATWOE".

It is interesting to see that from his point of view, he is ***Following*** the definition (he knows SSM). From the point of view of the shared cognitive environment among the people attending the meeting, he is ***Enhancing*** the ways to describe the system.

He explains how CATWOE can assist in a discussion of the issues, helping everybody in understanding where the other actors are coming from. He proposes to use CATWOE as a tool to focus on systems producing a specific outcome.

12) Frederick: "After you're done that, you do something call conceptual modelling, what are the activities that you need to do to bring about the transformation process"

Again he is ***Enhancing***; the operation proposed is not changing the focus of the boundary, but is detailing how to proceed in relation to what has been said.

Having explained the elements for thinking about a conceptual model, he tells the attendants that this is going to be his first time using conceptual modelling (he did not say SSM): he ***Sets*** a new boundary preparing the stage now for doing a rehearsing of the methodology.

For the next part of the session, Hannah and Dianne took the role of the GWC. They chose a system (likely to be chosen by the GWC) and Frederick assumed the role of facilitator. They were then defining outcomes, arranging outcomes in piles, naming a big pile (systems), specifying CATWOE, and working out the conceptual model. They later referred to the methodology as SSM. This part of the meeting from a macro perspective served as a ***Following***; it was reinforcing and enabling the group to gain confidence with the methodology. From a micro perspective, it comprised different games in which Dianne and Hannah were advancing and discussing several ideas under Frederick's facilitation.

Finally, what this section shows is that different methodological elements such as CATWOE, models, brainstorming can be used as different operations, games, or intentions on the boundary of what is considered relevant in the situation. Sometimes these elements are used even for more than one operation, raising the issue that it is possible to choose how we want to use them to accomplish a boundary transformation. It is also interesting to highlight that "methodological" remarks were not the only ones used to affect boundaries; common/normal language was affecting boundaries as well. This is coherent with Wittgenstein (2001) when he states that language is a tool. Consequently, the property of affecting the dynamics of the situation is not limited to methodology.

8.2.2 Emergent Courses of Actions and Contrast Spaces

In this section I continue with the aforementioned case. This time instead of focusing on the actions and language of the "nitty gritty" session, I am looking to the history of some of the concepts used in terms of their contrast spaces and trajectories. The aim

is to understand in a better way how emergent intentions were guiding, constraining, and attracting elements to the dynamic and trajectory of using Soft Systems Methodology (hereafter SSM).

I found four themes having an effect on how SSM was planned to be used with the GWC: Evaluation, think piece, outcomes and model. I track how the understanding of these topics developed in terms of contrast spaces. In the final part of this section I show how their meanings affected how SSM was intended.

8.2.2.1 Evaluation

As was already presented, the subproject used for these illustrations focused on evaluation. The kind of evaluation to be performed was not clear from the onset. I witnessed a first contrast in session #14. "Are we looking how [the regional council] can improve the [GWC] model? Or how the model can be improved?" They understood the dilemma as whether to evaluate them or to help them evaluate themselves. They decide for the second, perhaps in part due to the fact that the overall project was aimed towards improving participation (see Section 5.1.2). Consequently, the project started to be framed as helping the GWC to develop tools to evaluate themselves.

Next the team was considering the issue that perhaps the GWC did not want to be evaluated. Additionally, the people responsible for the GWC were facilitators just like TOP. The team saw this as a possible barrier to gain legitimacy for their work. TOP considered that the possibility was that the GWC would accept the evaluation. Consequently, they focused on developing a strategy to overcome GWC´s resistance.

The plan for the first meeting in session #28 was to find ways to engage the participant with a provocative question. They explored obvious ones such as why evaluate, or the reasons for evaluation, but at the end they settled for "what evaluation can do for you". The idea was to engage people at a personal level with evaluation to stimulate commitment. In this respect, this question was superior to the other options in the contrast.

After their first meeting, they did not encounter the expected resistance. This enabled TOP to focus on what the GWC saw as the ways in which evaluation was useful for them: legitimising their work for the regional council and improving the way in which they were carrying out their work. These became the principles for planning the evaluation.

8.2.2.2 Think piece

The think piece was a method used by TOP, and it is interesting to see how the contrast spaces produced different meanings for this tool. The *think piece* relies on creating a text where all the different views of the participants were placed. Their views were collected through interviews before the workshops. Additionally, the views on the document were continually actualised with the progress and developments on the workshops of the case study.

Here the story began when they were deciding how to make the questions to gather the views of the participants. There was discussion between a direct approach and an indirect approach to the questions. Here there were a couple of contrast spaces that produced a miscommunication. One person was thinking about direct-indirect from the point of view of ethics. Consequently, asking indirectly meant concealing something to the participant. It was not ethical. The other person was thinking about how difficult is to construct an answer for a difficult topic. Asking directly was in the light of a complex issue, overpowering the cognitive abilities of the participant. Consequently, a process was needed of building the relevance to construct the approach to evaluation. After some debates clarifying the confusion, this second take on asking indirectly was the contrast finally accepted (session #14).

What to do with the collected information was the next question. It was proposed to use a *rich picture* like the ones in SSM. However, they wanted to try the *think piece* as in a previous project. They also mentioned difficulties in a past project with the rich picture in a project involving Māori community like this one. It seems that the problem is that usually when using the rich picture during the workshop, the big group was divided in smaller groups. Some Māori were concerned that they were not aware of what the other groups in the session were talking about. Over this contrast, the

think piece collecting all the views seemed a better alternative. Additionally, the *think piece* was a way to work forward to the final report of the research.

As well as rich pictures, they also contrasted the *think piece* with statistical measures. In this approach what is meaningful is the percentage of the population supporting an idea. Here in the *think piece*, it does not matter how small is the group of people supporting an idea, the idea is treated as equal to others (session #28).

Up to this point, there were several meanings put on the *think piece* without contradicting each other. It was working as an indirect approach to facilitate the construction of answers of how to evaluate, a way to keep everybody informed of all the views, a way to keep the group together, a way to write the final report and a way to make the view of the minority meaningful for the process.

Another more political use of the think piece was suggested in session #31. TOP was aware that there were things that were difficult to say in the context of the meeting. It was easier to put a potentially controversial view in an anonymous written form. This enabled the group to raise difficult issues from a safe position.

This more political use is pursued further in session #38. They were facing the problem of new participants joining the group of participants for the second workshop. The *think piece* was seen then as a way to accelerate people and the possibility to assign the new participants a role, a mission to fulfil in the meeting. This was very interesting because they were also talking about the importance of having certain people on the workshops to stir things up. So two additional strategies/contrast spaces were derived for the same tool.

8.2.2.3 Outcomes

Outcomes were mentioned in session #28, the first meeting related to the Evaluation case study that I witnessed. Frederick referred to them as something which regional council was very keen about, so perhaps the outcome-based evaluation was preferable to stakeholder-based evaluation. Outcomes started to gain more importance for the group when Frederick in session #36 explained a conceptual model involving

interconnected activities. Because each activity has an outcome, it was possible then to focus on the outcome and think the evaluation around them (Figure 8.1a).

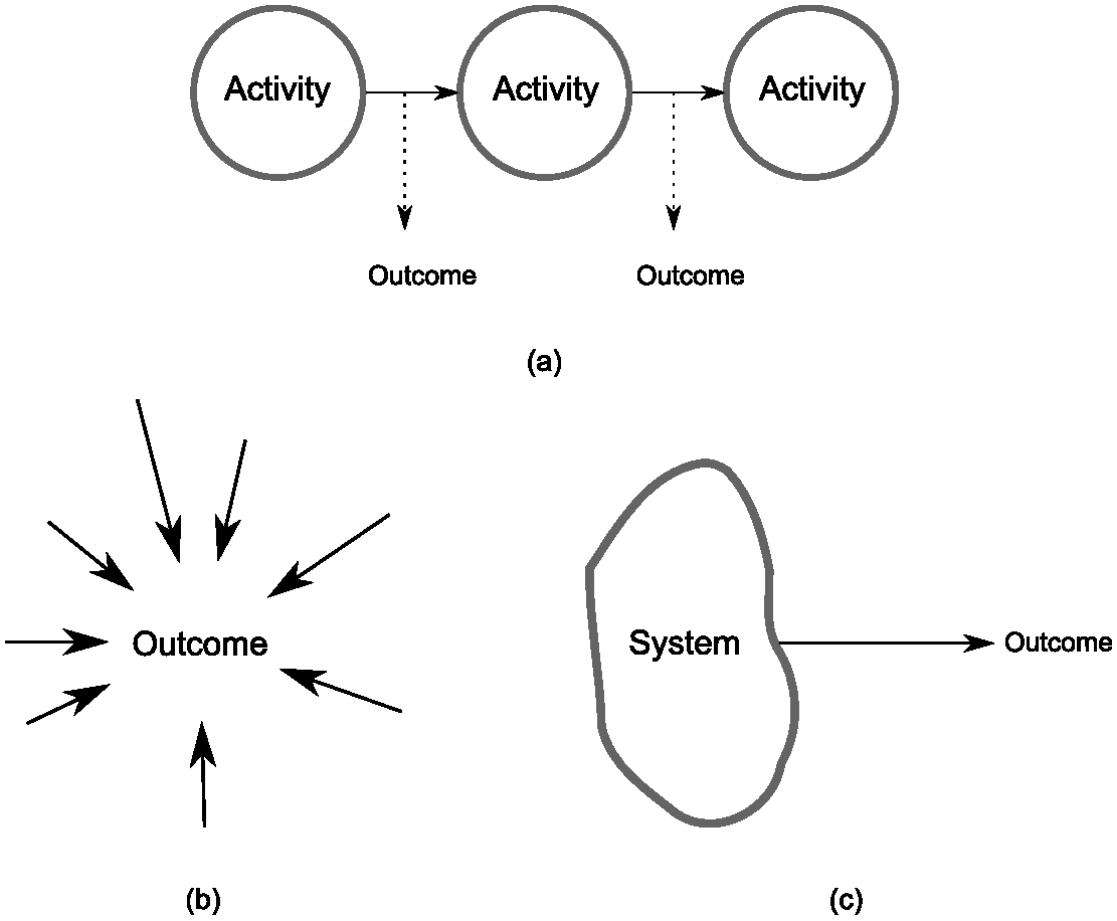


Figure 8.1. Ways in which TOP understood outcome.

Wanda in the only session that she joined to work on this subproject, and just after Frederick's argument, proposed that it was possible to use a global outcome and then to think about all the things that were necessary to arrive at that outcome. The outcome under this view is a kind of global sink (Figure 8.1b). So there was a transition from evaluating intermediate stages to evaluating the whole set of activities by their shared outcome.

In session #38, the "nitty gritty" meeting detailed in Section 8.2.1, outcomes suffered a series of transformations. First it was a way to organise a brainstorming (remark #4). The product of the brainstorming was considered as all the intermediate outcomes needed to arrive at the macro-outcomes. Next, Frederick suggested

grouping the outcomes in piles and giving a name to the pile, a kind of outcome encompassing the others (remarks #5 and #6). Finally, in remark #11 this outcome was seen as the product of a system that in turns required a description (Figure 8.1c). Now, making such a description was the focus.

8.2.2.4 Model

The concept of model used by TOP was affected according to the word used to describe it: mental and/or conceptual. When it was accompanied with mental, it referred to a cognitive representation of an individual. When accompanied by conceptual, it referred more to the kind of model or representations used in MS/ST to illustrate the activities needed to carry the purposeful activity on focus (see Appendix 5).

The first take on model was in regard to the way in which the GWC was conducting intervention. TOP was concerned about the facilitators disappearing in their own mental models of the situation (session #14), namely facilitators were not considering different views of the situation.

After the first workshop with the GWC, in session #31, it was noticed that the GWC´s facilitators did not have a formal approach to their own facilitation of the meetings. This situation was treated by Frederick as the GWC's lacking of a model or theory of intervention. Because of his background, it is sensible to infer that he is talking here about conceptual models as in SSM. The situation was reaffirmed in session #32, and it was suggested that TOP could help to provide tools to cope with the lack.

In #36, as was discussed in relation with outcomes, mental models reappeared as a way to show different possibilities for evaluation. They considered SSM and systems dynamics models. Despite being called mental, these methodologies are more in line with the notion of a conceptual model.

In session #37, Frederick suggested that people in the GWC were acting without a mental model. However, Dianne contested this from a psychological point of view, emphasising that everybody has mental models. Frederick made the mistake of

mixing here the ideas of mental and conceptual. However, he was trying to force a similarity between conceptual modelling and mental models in order to approach Dianne and Hannah's background.

Finally, at the end of session #37, they agreed on making explicit the mental model of the participant to give them the opportunity of sharing and construct something collective. So models were a way to share knowledge. This paved the way to use SSM as the way to express, share and reach agreement.

8.2.2.5 How SSM was affected?

Although the selection of factors chosen for this section is limited (evaluation, think piece, outcome and model) they are suitable to show that the use of SSM (see Appendix 5) was immersed in a web. Now, in order to show the intention, it is possible to show the methodology under the influence of the emergent trajectory arising from it.

What the emergent courses of actions do to influence the methodology is to constrain the dynamic, the possibilities for action. Additionally, it can be shown how once inside the web, the methodology can help the overall network to attract or subsume other elements inside it. This means that the look is for how SSM was constrained by the web, and how once part of the web, the methodology helped to attract other elements.

A first example of constraining the possibilities of action can be seen through the evaluation and the think piece elements. Their effects were coherent with what is normally understood as the benefits of using SSM. The role of these elements, more than constraining SSM in itself was constraining the fact that the methodology chose for working with the GWC was SSM.

When TOP decided how to evaluate, they did not choose an expert scientist kind of role. That is to say, they did not choose criteria to conduct GWC's evaluation in the way of the classic OR approach (Section 2.2.1). They went to find ways to help GWC to evaluate themselves. They went for a soft approach (Section 2.2.2).

The idea of working from this paradigm is in turn reinforced by some of the contrasts present in the selection of the think piece as a method in the process. Here, the ideas of allowing different views, and that it was necessary to construct an approach to evaluation, can also be seen as coherent with a soft approach.

After considering the way to evaluate and the effect of using a method in the way in which TOP was using the think piece, make the conditions very difficult for a classic OR approach (in fact computational simulation was briefly considered). They constrained the conditions to go for a soft approach. However, the effect on changing the methodology is small. They are more on the side of reinforcing why SSM was useful for this situation.

A more direct effect on the inner workings of the methodology is observed comparing TOP's work with the second and fourth stage of the SSM: the problem situation expressed and making the conceptual models. SSM tools for the second stage aim to answer the question "what are the names of the notational systems which from the analysis phase seem relevant to the problem?" (Checkland, 1981, p.166). SSM uses some tools to help the practitioner guide the description of the problematic situation to be improved. These tools basically refer to analyses of intervention (one), social characteristics (two), political aspects (three) and the elaboration of rich pictures.

However, as shown in relation to the think piece, TOP rejected the idea of rich pictures. They were looking at how to make people aware of the whole discussions and in this context rich picture was considered problematic. However, later when SSM was legitimised as the methodology chosen for working with the GWC, the think piece was seen as a replacement of the activities of SSM at the second stage. In this later stage SSM was starting to subsume, attract elements to the new web of meaning.

Yet, the think piece was not solving the issue of the names of the systems relevant for the analysis. TOP approached this issue by outcomes. As was shown TOP discussed outcomes in relation to activities, also as a kind of global goal, and as a global goal produced by a system. The outcome in this last contrast came to be the "name of the

system". Under this name, they could proceed with the third phase of SSM looking for a CATWOE description of the system. This step connects TOP's work with the usual stages and tools of SSM.

It is interesting to notice that outcome is not a word in SSM's epistemology. It can resemble the outputs of an activity. In SSM's epistemology, although not present, output can be inferred. This makes this concept secondary in relation to activities. However, TOP's emphasis makes it more meaningful, specially when contrasted with the notion that they were outcomes.

It can be argued that the curious diversion to name the systems and the change of meaning of the words was due to TOP's intention to make the process more relevant for the GWC. The regional council required an evaluation. It was easier to show that the work was geared toward this direction by talking about outcomes.

Now, in the fourth stage, TOP's work departs radically from what is accepted as SSM. In a superficial examination of the situation, it seems that everything is done according to what is expected from the root definitions and conceptual models. What is more, it can be said that the epistemology, the set of concepts to describe what was done with the GWC was right. However, let us see the following SSM's warnings-guidelines:

> Once conceptual building starts there is a noticeable tendency for it to slide into becoming a description of actual activity systems known to exist in the real world. This needs to be resisted because it negates the whole purpose of the approach…If descriptions of the real world slip into the model then in the comparison stage we shall be comparing like with like, and novel possibilities are unlike to emerge. (Checkland, 1981, p.170)

However, constructing a model of what was the real world was exactly the kind of thing that TOP was doing with the GWC. As explained regarding model, TOP was oscillating between understanding model as a mental representation and as a conceptual model. The dominant interpretation at the end was the mental. This produced as a consequence that they were looking the way to make explicit the mental representations that people were having of the situation. This can also be seen as a consequence of the purpose of evaluating the GWC. It seems logical to think that if

you are aiming to evaluate, you do it in relation to a reality, not regarding 'novel possibilities'.

8.3 Entwining Explanations

> I see the operation, but I am interested in how they combine to fulfil the intention. (Frederick, Session #41)

Frederick's phrase came just when I finished the presentation of my boundary games framework on the second feedback. It is interesting to see that although I frequently used the term intention during the session, at the end Frederick feels that we still do not have enough elements to "fulfil the intention". His question was one of the elements that pushed me to find bridges between the intentions used by the Relevance Theory and those from the point of view of Philosophy of Action.

Section 4.3 advanced some ideas about the relationship of the two approaches to intention presented in this thesis. It was proposed that based on the two faces of intention, intention and intentional action (Bratman, 1984), it was possible to establish a complementary relationship. Consequently, the approach developed in Chapter Six, the present-directed side of intention, deals with making sense of communication and actions and the coordination of behaviours. The one developed in Chapter Seven, the future-directed side, deals with how intentions can produce, guide and sustain an action.

However, reflecting more in depth on Garfinkel's (1981) ideas, I saw another way to understand the relationship between both approaches to intention. This way relies on understanding the explanations provided as cases of reductionist and holistic explanations. It is argued that understanding an intervention process using these two levels of explanation can give us a better understanding of the situation.

8.3.1 Reductionist versus Holistic Explanations

According, to Garfinkel (1981, p.14) :"The reductionist claims that one class of phenomena, more or less well explained by some body of theory, is really explainable by some other theory, which is thought of as deeper or more basic". The explanations

produced using this more basic or deeper body of theory is known as reductionist or microexplanations.

Garfinkel goes on to show, for example, how with a macroexplanation such as the psychological ones, the aim is reduced them to explanations from the domain of physics and chemistry. The claim is that "In microreduction the upper level object is explainable by the (lower level) microtheory. Therefore, the upper-level explanations can, in principle, be eliminated in favour of the microexplanations" (Garfinkel, 1981, p.51). This account mirrors work on MS/ST by Checkland (1981). Introducing Checkland serves me a contrast to emphasize some differences in the next part of the argument.

Both Checkland and Garfinkel question the reductionist's claim that upper level is dismissible. Checkland's argument relies on how the emergent levels of organization require different levels of description. However, while Checkland argues for a scientific method comprising reductionism and systems thinking, recognising the value of both approaches, Garfinkel is highly critical of microexplanations.

I am more inclined to Checkland's idea of complementarism. However, Garfinkel's critique is more useful in the sense that it enables us to see how these two kinds of explanations can complement each other. For this reason, I will continue to explain his argument but in Checkland's spirit.

Garfinkel uses the case of a reckless driver who crashed against a truck to explain the advantage of macroexplanations in relation to microexplanations. One possible macroexplanation is that the irresponsible way in which this person drove had been endangering him from a long time ago, so the crash does not take anybody by surprise. A possible microexplanation that perhaps the driver can advance is that the crash was due to him/her having breakfast that morning. Without having breakfast he could have arrived earlier at the point of the crash, missing the truck and consequently avoiding the crash.

In this case "The microlevel has an extremely specific object of explanation and consequently an extremely specific antecedent to explain it" (Garfinkel, 1981, p.56).

The explanation is only valid to explain the specific crash against this truck. However, the explanation is very unstable, that 15 seconds more or less having breakfast can change the outcome. Ideally, "an explanation must have a certain amount of *stability* under perturbations of its conditions" (Garfinkel, 1981, p.57). The macroexplanation focused on the recklessness is a more resilient explanation. It can survive time differences, breakfasts, even crashing against a different car.

> This difference makes the macroobject superior to the microobject in several ways. The first is pragmatic. The microexplanation includes data that are irrelevant to the outcome and therefore bury the explanation unrecognizable. It delivers an embarrassment of riches and so is less useful. It also does not lend itself to a certain kind of practical reasoning, which the macroexplanation does. In many cases the point of asking for an explanation of something is that we are interested in eradicating or preventing it. Microexplanations, by their nature, cannot lend themselves to this use. (Garfinkel, 1981, p.56)

According, to this Garfinkel poses that microexplanations and macroexplanations are generally dealing with different objects of explanation. Consequently, microlevel explanations for many purposes cannot replace the upper level. What is more, he suggests that criteria for a good explanation involve stability. This implies that upper level explanations are superior.

He suggests that the stability of upper level explanations is due to the kind of causality. While microexplanations rely on specific causes, macroexplanations rely on redundant or multi causalities. Hence, for example, if an attitude "is relatively important to a society, the means of generating that attitude will not be left to chance; there will be multiplicity, a *redundancy*, of mechanisms to ensure that the child developed the 'right' attitude. So the causality with which the effect is produced has a strong resiliency" (Garfinkel, 1981, p.57).

However, it is possible to see that both microexplanations and macroexplanations can have complementary roles to fulfil:

> The motivation of reductionism then becomes clearer. If some structural fact is responsible for a redundant causality producing *Q*, then, as I said, it will be misleading to cite the P_i which actually occurred as the explanation of Q. But *some* P_i did have to occur. The macroexplanation tell us that some realization or other will be the case to bring about Q but is indifferent to which. The microexplanation tell us the mechanism by which the macroexplanation operated. The structure gives the *why*, while the microexplanation gives the *how*.

> We can see the force behind the reductionist's claim. Without some mechanism or other, without some realization of the affectivity of some structure, it really would be mysterious to talk about the structure's *causing* something. But merely citing the specific mechanism which brought about the effect does not tell us the important fact that had that particular mechanism not occurred, then some other would have, to accomplish the same end. The crucial point here is that the particular mechanism was not necessary for the effect, and therefore it is not a good explanation to cite it as the cause. (Garfinkel, 1981, p.58)

Microexplanation shows the details of how something came to be. It shows the mechanism. Macroexplanation shows us the structure of the situation and with it, why the actual realization of something can withstand the use of different mechanisms. In a way macroexplanations are like the concept of equifinality on systems thinking, that it is possible to arrive at a steady state through different paths (Georgiou, 2007).

Now the question is how this relates to the two kinds of explanations about intentions presented here.

8.3.2 Two Levels of Intentions

Having explained what Garfinkel considers microexplanations and macroexplanations, I can now link both kinds of explanations with the approaches to intention presented on Chapters Six and Seven. Specifically, I will argue that Boundary Games can be linked to microexplanation while Juarrero's approach can be linked to macroexplanation.

Boundary Games are presented in Chapter Six and in the illustration in this chapter can be used to show the effects of communications on the shared cognitive environments of the participants in a situation. It draws from Relevance Theory and the concept of boundary in Systems Thinking. Because Systems Thinking is a kind of synonym to holism, it can be surprising to argue now that Boundary Games is a reductionist approach to explain intention.

However, just consider the kind of explanations that can be constructed from this position. We can arrive at some shared cognitive environment because somebody just ***Set*** that boundary. Alternatively, we can arrive at that situation because a boundary was ***Challenged***, and it was necessary to define a new consistent boundary or because there was an original boundary that suffered successive ***Enhancements***. The point is

that in any case the antecedent to the desired situation is too specific to really explain why we arrived at that situation. If we understand intention as something that is guiding action, this explanation lacks the redundant causes that can guide the interaction to that specific point. It shows how we arrive at the situation, it answers a *how* question.

How questions are important because they show examples of how things can be achieved in the field. In fact, one of the problems that frequently I saw in TOP's work was a certain amount of confusion about how to tackle some issue. An important part of the confusion was dispelled once they found ways to act, ways of *how* (e.g., modes of action, methods and methodologies). Over the skeleton of hows, it was easier for the team to fit more pieces and reflections and have a contrast to give desired meanings. In some way the hows are pointing to modes of action and methods.

A second argument strengthening the case of Boundary Games as microexplanations is how the cause is conceived. It can be argued that they fit collision-like Newtonian, efficient causes. As Chapter Six shows, every communication affects the boundary. It strengthens or weakens the boundary of what is seen relevant. Although the effect that they produce depends on the individual cognitive environments of the participants, the process is about communications "colliding" against the boundary.

Now considering intentions as a Complex Adaptive System, it is possible to see a different kind of cause. As it was mentioned in the last chapter, this approach to intentions considers the case in which events start to consolidate loops creating a web in which elements reinforce one another. This was called second order contextual constraints, which additionally were linked to attractors and constraints. In different ways, these concepts are referring to a redundant cause or multicausality in Garfinkel's terms. Understanding causes in this way can help to explain why a mixture of Boundary Games can be different but the trajectory of actions is driven by the same attractor to the same sink.

Additionally, as it was explained, Juarrero shows how meaning derives from these processes. Meaning is important here because it can be used to establish a plot. Many dissimilar elements can be integrated as part of a plot. So contrary to the Boundary

Games approach that explains the moves in a technical sense detached from what people are actually thinking, Juarrero's approach using meaning gives the possibility of seeing how actors can construct a story integrating past actions. The constructed plot can in turn be used by actors in practical reasoning processes to take decisions about their future actions. What is more, from the point of view of this argument the plot leads us to answer the why question, why we arrive to some situation.

Understanding both approaches to intention as different levels of explanation lets us see that they deal with slightly different objects. However, it is still necessary to show how they can interact with each other to have a really combined approach to understand the intention on methodologies. I propose to use as the joint between both approaches the idea of trajectory of actions.

Chapter Four mentioned Juarreros´s definition of intention. This definition proposes how emergent trajectories of action are conditioned by the second order contextual constraints. Juarrero's treatment of trajectories of action is based on trajectories in information flows, using information theory. What connects a trajectory is how information flows from a source to a destination despite noise and interruptions.

I propose using Boundary Games as a way to show a trajectory. This approach enables trajectories to be seen as the trail of actions on the boundary and the transformations that it experiences. Namely, it shows how a boundary is Set, Follow, Enhance, Probe, Wander and Challenge. Even when the boundary is abandoned it is not destroyed (as argued in Section 6.3.4) helping to see the continuity of discontinuous trajectories. Therefore, this works as an alternative explanation to information flows.

Conceptually, there are some advantages in this approach. Because it relies on the concept of boundary it can be connected with previous existing approaches to systemic intervention. Additionally it is based on a social way to look at intention. This expands the possibilities for understanding interventions, which are basically immersed in a social setting. Furthermore, it attaches a kind of purpose to the individual moves according to their effect on the boundary. This facilitates analysing

sequences of actions as Sections 6.4.2 and 8.2.1 show. So in a way is an explanation of higher order than information flows.

Yet, it still maintains coherence with the notions of second order context sensitive constraints, and how the different levels interact and affect each other. It will be possible to see how individual moves in the games in some cases start to reinforce each other. If the boundary growing or strengthening becomes stable, it can be a sign of reinforcement loops from which contrast spaces start to emerge. With contrast spaces, trajectories start to have meaning. With meanings, practical reasoning enters the scene and intentions as complex adaptive systems can start to guide the individual moves on the boundary games.

8.3.3 A final Knot: Language Games

The discussion about what intentions are and how they can be studied and the evidence from the case study can give us arguments to support and expand certain points presented in relation to language games as portrayed in Chapter Three.

It was proposed that methodologies were not the only language games in a situation. Other language games can already be present or arise by or in interactions, activities and "forms of life" in the intervention context. This leads to the idea that methodologies are not the only ways to intervene or describe the happening in an intervention process. A methodology would be part of a network of language games. It is a game among others.

This situation is shown, for instance, in Section 8.2.1. There it is shown how people were using very different strategies that in many cases were not related to a methodology to affect the boundaries of what was seen as relevant. Talks about cards, evaluations, invitations and methodologies were creating a picture of the task at hand. All these games contributed and intermingled in the construction of the understanding of the situation, and the construction of the intervention process. From Wittgenstein's point of view, it could be argued that all the games eventually overlapped giving strength to the construction. This is similar to Mauws and Phillips (1995, p.327) idea

on section 2.9.3. They propose to approach managerial practice in terms of collections of diverse language games or "flexible networks of language games".

However, what I saw also let me contradict Wittgenstein when he argues that there is nothing common in all the family resemblances of language. At least in this situation as is shown on section 8.2.2, several elements (evaluation, think piece, outcomes, and model) were converging in how the methodology was going to be understood. Although at the beginning they look and feel dissimilar, it is possible to see things tending to some logic to some contrast space. This enables to re-signify their meanings from a more unified perspective in which the elements reinforce each other. From this what is emerging as common is the intention.

There is another idea already presented in Chapter Two that finds support on elements on this chapter. The idea that introducing a Language Game embodied in a tools can affect the Language Games in place but in turn, those also affect the tools introduced. The easy way to see this is in terms of tools intentionally affecting the boundary and tools under the influence of emergent trajectories of action.

In the first case, a language game (the tool) is used with the intention to affect the language game in place (the boundary of what is seen as pertinent) in some of the six proposed ways in Chapter Six. In the second case, the language games in place can be seen as the trajectories of actions and previously established contrast spaces. Consequently, when the tool arrives at the place is re-signified to the meanings in place. This is what happens in Section 8.2.2, when SSM is used in a non-standard way.

8.4 Conclusions

This chapter provides answers to the question of how practitioners' intentions affect methodologies. At one level intention changes the way in which a methodology affects the boundary of what is seen as relevant in a situation. At a different level, the possibilities of a methodology are constrained and/or attracted by meanings and trajectories of actions emerging from second order contextual constraints.

Each level of analysis of intention lets us in turn answer different questions about the use of the methodology. At a microlevel, the boundary games show us the actions that were taken to arrive at some outcome. It answers how the process developed with the potential to make clearer the modes of action employed. At the macrolevel contrast spaces and meaning let us understand why, although problems can be found on the way, the dynamic of intention was gaining stability and direction.

Now that the purpose of this thesis has been met, the next chapter presents an overview of the argument, limitations and possible future ways for development.

Chapter 9 Closure

The central question in this research is: what is the relevance of intention in MS/ST intervention? What follows is an overview of the ways in which the exploration conducted shows the ways in which the concept of intention is relevant and contributes to the understanding and practice of interventions in MS/ST. Additionally, it proposes some future research and examines the limitations of the work.

9.1 Contributions

The contributions are divided into three sections. The first one summarises what it has been said about both sides of intentions. Next, it is shown contributions for practitioners/researchers. The final subsection shows the contribution for Boundary Critique Theory.

9.1.1 Intentions in Intervention

In the preceding chapters, based on Philosophy of Action, I approached intention as a two faced-phenomenon. "We do things intentionally, and we intend to do things" (Bratman, 1984, p.375). I used two sets of different philosophical concepts and theories to underpin the understanding of each face (Table 9.1). Both approaches are complementary. Both describe different issues and answer different questions at different levels about how actors' intentions appear in interventions.

Despite these differences, both sides of intention share language and actions as the point of reference to show how an actor's intentions cause effects. This allows studying the influence of intention in a big range of tools, in Wittgenstein´s sense, used to interact and intervene.

This dual approach to intentions introduces a preliminary proposal of how to fill the gap of the underdeveloped concept of intention. Additionally, it suggests ways in which actors can be flexible and creative in the use of tools. The following two subsections explain each one of the faces of intention in Table 9.1.

	Intentional Action "we do things intentionally"	Intention "we intend to do things"
Time Horizon	Present.	Future.
Underpinning Philosophy	Philosophy of Language.	Philosophy of Action.
Underpinning Theory	Relevance, Boundary Critique.	Complexity.
Performed Roles	Making sense of our actions and those of others. Coordinating actor's actions.	Guiding, sustaining and causing action.
Kind of Cause	Collision-like, Linear.	Redundant, Constraint.
Way of study	Effects on Boundary.	Contrast Spaces – Meaning – Reinforcing Webs of Relations.
Intention is…	Not explicit, yet they can be recognised through behaviour and effects.	Course of actions produced by emergent second order contextual constrains.
Level of Explanation	Microexplanation.	Macroexplanation.
Question answered	How the current state was reach.	Why the current state was reach.
Effect on tools	Tools used to produce a mix of six effects: setting, following, challenging, enhancing, probing, wandering	Tools attracted, and constrained by emergent courses of actions and meanings.

Table 9.1. Two Faces of Intention Side By Side.

9.1.1.1 We do things intentionally

The face of intention developed in Chapter Six deals, with how "we do things intentionally". I underpinned the understanding of this face in Grice's (1991) philosophy and Relevance Theory (Sperber & Wilson, 1995). Accordingly, communication works thanks to the process of conveying and recognising intentions. More importantly intentions can be recognised by their effects. For helping to recognise those effects I also draw from Midgley's (2000) approach to Boundary Critique Theory.

Relevance Theory suggests that our human cognitive environments are affected by every communication. New communications can strengthen or weaken the previous assumptions held by the actor (Sperber & Wilson, 1995). Following Midgley (2000), I suggested the idea of considering the presence of a boundary around actors' cognitive environment. This boundary in the specific case of intervention processes encloses all the assumptions of what is considered pertinent in a situation.

When both theories are combined, intentions are recognised by the ways in which the ideas conveyed in the discussion affect the boundary of what is seen as relevant. They work as collision-like, Newtonian or effective causes. A communication is used to "hit" the boundary, and as a consequence the boundary experience changes.

This way to conceive intention helps us to make sense of our actions, those of others, and the coordination between actors' actions. I found six ways or six Boundary Games to make sense of how intentions affect and change the boundary:

- Settle creates a new boundary out of previous boundaries.
- Following represents a movement inside a boundary, reinforcing it.
- Wandering depicts a movement outside the boundary reinforcing what is inside.
- Probing shows a movement on the boundary. It focuses the attention on some issue and tries to establish where the limits are.
- Enhancing introduces new information, making the boundary bigger.
- Challenging weakens the boundary from the inside or the outside.

It is argued then that any communication, including methodologies, can be used to achieve one or a combination of these effects. In this sense, they work as pragmatic principles (see Section 4.1.1). The rules (operations, intentions) can apply in different degrees, can conflict with each other and can even be contravened without losing its effect on the activity (Leech, 1983). Section 6.4.2 shows an illustration where this kind of behaviour is exemplified.

In Section 8.3.2 it is proposed that this approach show us at a microlevel how different actions or operations were used to arrive at some particular boundary. It is useful because it allows us to reflect on the modes of action and, consequently, on the different ways in which the methodologies can be used and articulated to arrive at some end.

However, this way to explain intentions works as a microexplanation. Consequently, it is not very stable (Garfinkel, 1981). This means that particular moves on a boundary are not a good explanation of why we arrived at some situation. For instance, knowing that we ***Set***, ***Challenge*** and ***Follow*** a boundary does not tell us why the boundary was pursued. The approach can show us *how* we arrived. It shows the trail of actions that enable us to arrive there.

9.1.1.2 We intend to do things

The second face of intention, the one developed in Chapter Seven, deals with how "we intend to do things". Here the underpinning is Philosophy of Action, although the particular branch that I am using takes as the starting point a critique on traditional ideas on this area. Juarrero (1999) bases her approach in complexity theory. Consequently, intention is seen as a complex adaptive system in which trajectories of actions emerge from the interactions of a web of relations (including Language Games). This web in turn constrains and guides the actions. The cause here is seen as redundant, namely, multiple factors reinforce each other to "guarantee" the outcome.

The way in which this face of intention does its work is through the partition of the space of possibilities for action. This means that certain actions will resonate as coherent with the present web (are possible) and others not. It is for this reason that intentions do not necessarily imply that they must be clear, explicitly defined or even conscious (only require to resonate). It is for this reason that knowing what we do not intend, being aware of the wayward chains of actions, help us in the process of finding out what we intend (it helps to partition the space). It is also for this reason that we can decide not to act, and still be intentional. If something is coherent with the constraints implied by the web of relations, action is not really necessary. The complete arguments for these implications are shown in Section 7.3.2.

The partition of the space of possibilities is also responsible for the presence of meaning. This is expressed by Juarrero using Garfinkel's (1981) idea of contrast spaces. We cannot really get the meaning of a communication if we do not contrast what the actor wants inside the space of possibilities with what the actor is trying to leave outside.

Tools are affected in this view because they take their meaning according to the contrast space to which they are subjected. The partition of the space acts as an attractor. Consequently, actions (including language) that in a first moment seem incoherent with the constraints in place, can be adapted and integrated to the course of actions imposing a new meaning.

This approach deals with factors that reinforce each other as redundant causes (see Section 8.3.2). It can show us a macroexplanation of *why* we arrive at a certain situation. They allow us to build a plot. Its explanations are more stable that the ones of the first approach.

9.1.2 For Practitioners and Researchers

> Depending on which explanation one chooses, the solution takes on different form. (Mason & Mitroff, 1981, p.11)

Mason and Mitroff suggest that for certain kinds of problems, there are connections in the way in which they are explained and their solutions. I see the ideas proposed here resonating with this. There is a proposed way to understand interventions and there are some ways to learn about the process underpinned by those descriptions.

The following contributions aim to provide practitioners/researchers and actors in general with guidelines and tools for a more nuanced and reflective approach to MS/ST interventions. It deals with a way to look at the process of interventions, some guidelines for intervention, guidelines for making accounts and learning about the use of tools, and in the final section there is the proposal of a conceptual model that looks to combine the previous sections.

9.1.2.1 Appreciating Interventions

This section is an overview of the different concepts seen through this thesis and the y view interventions that these concepts allow. The argument starts in Chapter Two where I proposed to understand the use of methodologies, methods, techniques, and also, theories or the simple use of words in an intervention context through the concept of Language Games in Wittgenstein's (2001) philosophy. All of them share "family resemblances". All of them are possible tools that can be used to intervene.

The Language Games' framework let me treat all the aforementioned seemingly dissimilar elements under the same framework. This is so despite differences such as level of elaboration (consider a word and a methodology), or philosophical underpinnings (consider mathematical modelling and storytelling). When used all of them are threads of language and action. Consequently, the whole of the intervention process with all the possible tools that it can encompass can be framed as multiple overlapping Language Games.

Every game has rules, and the Language Games (tools) used in intervention are not an exception. However, under Wittgenstein's perspective these rules do not need to be fixed. They can be followed, but also bent, changed, adapted and used for many different purposes. The rules depend on the actors and their social interactions. The meanings behind the rules derive from the constant re-enactment, and use made of them.

The Language Game understanding of intervention can be enriched by the theories first described in Chapter Four and used to underpin intention in Chapters Six and Seven: Relevance Theory and Complexity Theory. It was argued that because in relation to intention they are connected with language and action they can support and complement Language Games' propositions.

Relevance Theory advances the idea that individual actors have cognitive environments, namely sets of ideas that we use to make sense of situations. Every time that we receive a stimulus from another actor, we assume it is intentional. Then our brains aim to make sense of the situation and our cognitive environment changes.

This helps to explain why any kind of stimulus can be used to intervene, and why every action (including the use of tools in an intervention) somehow produces changes in the context. Thereby, when people interact there is the opportunity to change the context in a way that allows us to extend the mutual shared cognitive environments of the actors. These modifications change the way in which we perceive and use tools, changes the possibilities for future interaction and, hopefully, will provide a ground for more enriching interactions.

Complexity Theory, the theory underpinning Juarrero's (1999) approach to intention, is based on complex adaptive systems and autocatalytic networks. Namely, from the interactions of a set of elements emerge a web in which some of the elements reinforce each other and can sustain the existence of the web. In Chapter Eight, based on Wittgenstein, I argued that the strength of the intervention process depends not on a central thread but on the "overlapping of many fibres" (Wittgenstein, 1958, §67). From the point of view of autocatalytic networks, it can be said that the strength in an intervention process depends on how all the tools used by all the actors reinforce each other.

From the aforementioned proposals, it does not make sense to centre the understanding of an intervention process on methodology. Methodology is just one among many possible fibres. What is more, methodology does not signify by itself. It is through social interaction where actors came about with the uses of methodologies and the language games in general. These uses are the basis for the construction of meanings and potentially different ways to signify and be flexible with the tools involved.

9.1.2.2 Guidelines for Intervention

Through the thesis, I have been extracting recommendations about how to approach interventions. These recommendations derive from Language Games (Section 5.5.3), Boundary Games (Chapter Six), and Intentions as a Complex Adaptive System (Chapter Seven). Here I am presenting them in a condensed form.

From the idea of Language Games derives the possibility of using many different conceptual constructs to intervene. Tools, ideas, methodologies, and theories all can be used to interrogate the situation. In this interrogation, we can lead people to "guess the essential thing" (Wittgenstein, 2001, §210). We can let the participants play and explore the issues to recognise whether they came from similar or different paths. We can guess whether the participants have problems understanding the meaning if they cannot follow the implicit or explicit rules posed. In this scenario, we will need to find ways to reintroduce the concepts.

Boundary Games imply relevant communications, namely the possibility of connecting with the background of the participants with a minimum effort. Communications can be use to affect a boundary in a mix of six different ways. It is a good idea to use mixtures to uncover different interpretations of the issues. This helps us to realise whether the participants are attaching the same meanings to the issues.

It seems from my observations in the field that when there is a mix of games in the dynamics the process seems more robust. It also seems important to keep different boundaries "alive". Their existence can potentially contribute more ideas.

From the perspective of intention as a complex adaptive system, pays to focus on what we do not intend (what we want to avoid) to clarify what we do intend. It is important to build a web of relations reinforcing each other when intervening. When we have the web, that in itself helps to guide, cause and sustain the intervention.

Meaning emerges against a contrast. Therefore, building contrasts will make it easier to drive the situation in a direction and really take advantage of all the tools applied to the process. They will be more easily assimilated to the web of relations, and they will support such a web. To obtain the benefit from a reason or guideline for doing something, the reason/guideline needs to be pursued in an intentional way.

Because all these principles are supported by theories and philosophies, it can be argued that they cover the lower invisible part of the methodology iceberg described in Section 2.3.2. What all these guidelines or principles need now is to find ways to develop the categories on the upper, visible part of the iceberg.

Checkland (2000) argues that when guidelines are iteratively used in intervention processes they can, with time, develop modes of action. Consequently, it is reasonable to think that the guidelines presented here could be the base for methodological developments. However, it can be noticed that these ideas do not need to be a method or methodology on their own. They can be applied in conjunction with other methodologies or tools to intervention.

9.1.2.3 Guidelines for Making Accounts and Learning about Methodology Use in Interventions

Interventions and methodology use are understood here based on Language Games and intentions (Chapter Eight). The proposed approach can integrate the methodologies, methods, and other kind of actions (theory-led approach) with the social interactions, expressed in terms of intention (practice-led approach) in which they are embedded. Hence, in achieving this combination, the work corresponds to what Keys (1997) identifies as the third way to learn about the OR process, as was introduced in Chapter Two.

Chapter Eight shows how descriptions, accounts of an intervention, can take the form of Boundary Games, Contrast Spaces and the ways in which different factors and Language Games reinforce each other in the situation. The application of these ways of description can help us to understand different aspects.

Boundary Games provides a way to describe modes of action. The idea is to describe language and actions in terms of their effect on the boundary of what is considered relevant. This can help to recognise meaningful actions in the process and help to identify mode of action as sequences of Boundary Games. As Kotarbiński (1966) remarks there are infinite ways to describe an action. The determinant factor to describe the action is the intention. This approach enables the practitioner to describe action in terms of the intentions/effects pursued.

Intention as a complex adaptive system offers us two ways to make descriptions: contrast spaces and the analysis in which different factors reinforce each other. Contrast spaces help us to clarify the meanings applied to the different actions and tools. Analysing the different factors/Language Games present in the situation, and whether they are reinforcing each other lets us reflect about the directions in which these tools are being driven by the situation.

Now, the elements presented to make an account can also be applied to the problem of tuning/improving a method. Expressing a particular intervention process in terms of effects on the boundary can help to recognise the importance or not of some actions, or the possibility of changing some of the actions based on the achieved effects or the same dynamics of the situation. Additionally, the idea of contrast spaces can help to determine powerful contexts of meaning to be applied when using the method.

The reflection on a sequence of action in terms of boundary games can also help to recognise certain sequences of events or actions and then develop recommendations about their proper order or application. This is a recommendation more in the order of the methodological.

The overall purpose or potentiality of this approach is to intentionally enhance the way in which we can use methodologies and methods.

9.1.2.4 A Conceptual Model for Intentionally Intervening

The model on Figure 9.1 is inspired in the SSM model on Appendix Six by Checkland and Sholes (1990). It uses the same kind of conventions such as activities nested and monitored at different levels. In this case, the figure represents the two levels of intentions proposed here, and extra layer aimed to learn from the process and improve the way in which we intervene intentionally. The purpose is to organise in the way of a model some of the implications of using intentions to reflect about an intervention. For that reason I call it a model for Intentionally Intervening. This can be thought of as an initial approximation to use the ideas presented here to intervene.

The inner part of the diagram deals with doing things intentionally. It shows a possible way to use Boundary Games (Chapter Six). Basically, the process is to appreciate how the boundaries are affected by actions of all the involved in the interaction. Then on this basis the practitioner can reflect on what effects are relevant for the situation. Finally, the practitioner can choose and adapt a tool for its use on the situation having into account a possible combination of the six games defined. The most inner part is then monitored in relation to the advances made towards building a relevant shared cognitive environment among the actors. The criteria to judge such a cognitive environment takes into account the usefulness for making sense of our actions, those of others and the consequent implications for coordination, namely the roles for present-oriented intention.

Having a shared cognitive environment is an important base for an intervention but is not enough. We can share some ideas, but we can disagree on their interpretations or implications. Consequently, on top of this layer came the intention to do things, the future-oriented side of intentions. This level is concerned with the emerging meaning derived from the interaction between a web of relations and the established contrast spaces. The idea is to direct the attention of the practitioner to build/organise such webs, and contrast this with what is not the web. This layer of intention is then monitored in relation to the trajectory of actions and the second order contextual constraints. The criteria to judge whether they are useful (or corrective action is needed) takes into consideration guiding, sustaining and causing the action, the roles of future-oriented intention.

Finally, in the most external level, the idea is to learn from the process for improving it and improving the ways in which the tools are used. This is done through the identification of modes of action and the understanding of how intentions guide the process. Mixing this two parts is necessary for achieving the third way to learn about the intervention process (Keys, 1997).

Looking at the whole diagram it is tempting to speculate that the whole system is working simultaneously. When some tool is used to affect a boundary, at the same time some trajectory is implied. When a trajectory is suggested some operation is done on the relevant boundaries. Obviously, the middle levels are also affected.

Consequently, in every interaction, the web of relations changes, and with it, meanings and contrast spaces.

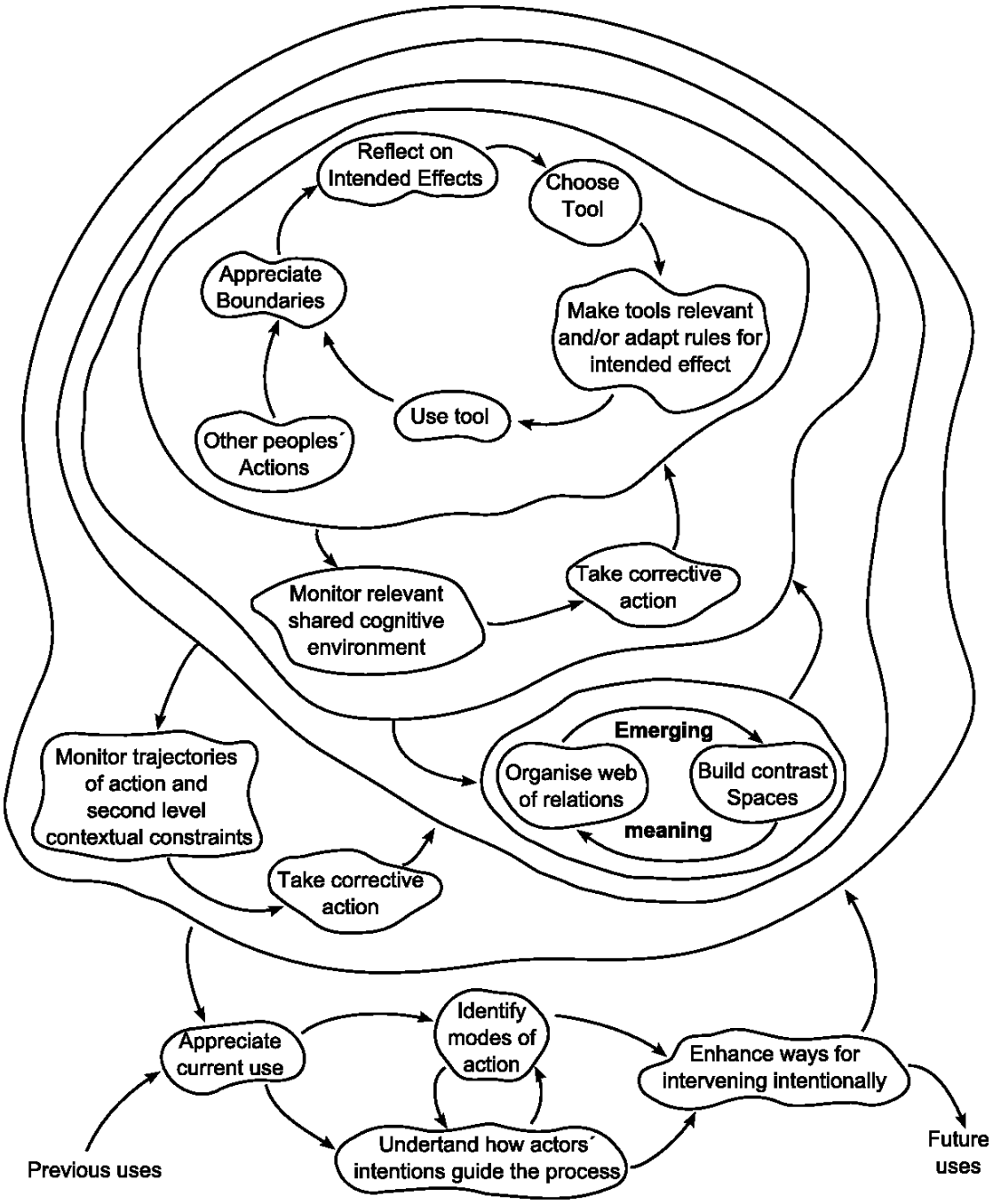


Figure 9.1. Conceptual model for Intentionally Intervening.

This suggests that you can approach an intervention process from the top down but also bottom up. In a top down there is the idea of a trajectory or second level

contextual constraints. The problem is how to build webs and contrast spaces able to guide, sustain, cause (constrain) actions? and how to create a shared cognitive environment to sustain this? From the bottom up you start to create a shared cognitive environment. The challenge is how eventually in these emergent process trajectories of actions and second level contextual constraints can be built.

An unexpected consequence of this conceptual model is that I discovered that in a way helps me to understand my research process from a new perspective. I started a research process building a shared cognitive environment with my participants. From this I search for connections (redundant causes) and meanings. If those were promising I embarked in some research direction. If they proved dead ends, I tried to look for new connections, for new shared cognitive environments. In some occasions, I also had insights about the nature of a situation. This produced a trajectory of actions looking for meanings or contrast spaces favourable to that insight.

9.1.3 Implications for Boundary Critique

Boundary Critique Theory is discussed in Sections 2.2.3 and 6.6. This strand of Critical Systems Thinking aims to make visible the ways in which claims are conditioned in an intervention process. For this reason, its approach is dialectic involving constant reflection. The reflection is performed in relation to the participants' perceived boundary. The boundary comprises what is pertinent in the situation. Changes in the boundary mean that the elements seen as pertinent will change as well as the whole approach to action in the situation.

It is argued in Section 6.6 that Boundary Critique Theory can benefit from Boundary Games, the approach developed in Chapter Six. Boundary Games provides an approach for constantly reflecting on the effects of each of our actions on the boundary. It helps to explain not the way in which claims are conditioned but the ways in which the claims are made.

The approach, contrary to what has been previous in Boundary Critique Theory, provides the tools to shows how any piece of interaction or information can have

effects on the boundary. Furthermore, it shows that possible criteria to stop boundary expansion need to take into account limits by the cognitive processing effort.

Boundary Critique Theory can also benefit from the notion of contrast spaces, as argued in Section 7.5. Contrast spaces can be an additional tool to help to understand how facts and values are conditioned by the intention/contrast associated with a boundary.

Overall, to the discourses and theories already informing Boundary Critique Theory (Section 2.2.3), this thesis contributes ideas from Languages Games, Language Pragmatics, Philosophy of Action and Complexity Theory.

9.2 Future Research

There are areas that I have not visited in my process. For some of them this was because I saw them as inconvenient at the time, or they could have made my task harder. Others were not the focus of my research, or they were outside of my area of knowledge. However, I consider all of them very attractive for further research.

9.2.1 Further Explorations on Intention

When I was deciding how to understand intentions, I took decisions to simplify the task at hand in relation to Philosophy of Action. Consequently, I ignored a complete branch dealing with Collective Intention, and I simplified the problem of Intentional Action.

Bratman (1999) criticizes Philosophy of Action for paying too much attention to the intention as an individual phenomenon. In my case, because I was dealing with the intention of the practitioner I decided on taking this route. However, as Gibbs Jr. (2001) points out intentions can emerge as the product of social interactions. This points to the important field of how intentions are generated. Notice that my work does not deal with this topic directly. It is more interested in their effects.

Additionally, it could be of interest for MS/ST to understand how collectively we can intend to change a situation. Some of the authors that I found but yet remain to be studied are (Bratman, 1993; Gold & Sugden, 2007; Kutz, 2000; Petersson, 2007; Saaristo, 2006; Tollefsen, 2002; Tuomela, 1991, 2005)

Another aspect requiring more research is my treatment of Intentional Action. I showed on Chapter Four that the use of communicative intentions let me deal with some aspects of Intentional Action. I can say that any manifestation of a Communicative Intention is an Intentional Action. However, not every Intentional Action is a Communicative Intention. It remains unclear to me the elements missed from my interpretation.

Finally, one interesting area of exploration with implications for Philosophy of Action is the debate simple view vs. single phenomenon view presented in Section 4.2.2. The problem is if always that we do X intentionally we were intending to do X. Here is a problem in which researching MS/ST interventions can potentially throw lights. A preliminary reflection base on the argument presented seems to suggest no, namely the single phenomenon.

9.2.2 Analysing Social Interaction and Intervening in Other Fields

There are two broad topics in which the developments in this thesis can be transferred to other fields of knowledge: analysis of social interactions and intervention. They can be transferred because they are based on intention and language. Intention is a general concern in social science used to make sense of situations (Prasad, 2005; Schwandt, 2000). Language possesses the versatility of being a problem with its own field of study or a perspective crossing multiple domains (Verschueren, 1995).

In the research, I focused on a specific kind of social interaction, that of interventions. However, it is likely that the utility of the tools that I used can be extended to other kinds of interactions. In those perhaps they can help to answer questions regarding whose intention, what intention, and which actions were performed in the process of achieving something. I consider that this research is presenting ways to analyse

interactions that can find a place in broad areas such as discourse analysis and conversation analysis (Silverman, 2000).

On intervention, I am focused on MS/ST. However, this is not the only branch in management concerned with intervention. It will be worth exploring whether there are possibilities for cross learning with other pro intervention areas such as Organizational Development, or Strategy. Additionally, interventions are not circumscribed to management. Consequently, it would be interesting to explore as well connections with disciplines such as family therapy and education.

9.2.3 Ethics

Part of the motivation for embarking on this research was to consider the importance of actors in determining the shape of an intervention. This work shows this importance in explaining how practitioners' intentions affect intervention. If the practitioners are more aware of the kind of effect that can be produced by the use of a methodology, the door opens for more creative and flexible uses and, consequently, to more deviations from the standard. This brings a responsibility that, as Brocklesby (2009, p.1075) suggests, "certainly cannot be left to others". The actors need to consider their ethical stand on interventions (Romm, 1996).

Ethics is not a question of only codes of practice. Simple prescriptions "are doomed to failure" (Taket, 1994, p.131). In fact, from the perspective argued here, codes of practice, as any other language game when used, can be affected by intention. Potentially, they can even be used for unethical purposes. For instance, codes can be used to identify and exploit possible flaws; an example of how a pragmatic principle can be violated, but in some way it continues to guide the activity. If the approach to ethics by codes is flawed, a different approach is needed. It is from this background that "self-reflection on ethics has been put forward as an alternative to devolve ethical responsibility from these [frameworks and codes of ethics] to practitioners themselves" (Córdoba, 2006, p.1033).

Depending on the authors, self-reflection involves examining "every micro-decision" (Brydon-Miller et al., 2006, p.129), "not just to look at things from different angles,

but to do so in a way that will be considered right or useful" Midgley (1995, p.547), and "reflection about how people deal with ethical dilemmas and their own judgements. In other words, self-reflection on ethics needs a critical review of its emergence and purpose(s)" (Córdoba, 2006, p.1033).

The ideas that I present in this thesis cannot turn a practitioner ethical. However, they can be used to reflect on the effects of our actions. They provide tools that can be used for supporting self-reflection.

For example, Boundary Games enables us to show how every action and communication have effects on others' cognitive environments. Consequently, they can work at the level of micro-decisions. Thinking about different angles can be pursued through Contrast Spaces. The emergence and purpose of ethics can be traced in terms of how intention is emerging from a web of reinforcing relations.

An intervention using this approach has yet to be tried. In this regard, Brocklesby (2009) makes a point to consider: social circumstances, constraints, power relations, and interpersonal dynamics, conspire to make real time ethic reflection difficult if not impossible.

9.3 Limitations

I will divide the issues on the limitations of this work in three reflections. The first is about the conditions in the setting of the research. The second makes some considerations about the conceptual underpinnings of the work. The third and last is concerned with the quality of the research in itself.

9.3.1 About the Setting

How appropriate was the setting for my research? Regarding the amount of relevant data to work with, it can be noticed that the use of methodologies in the setting was limited. Additionally, most of the work in the first months of my involvement was used by TOP for reporting, not intervening. Most of the data gathered at the beginning was not very relevant to my problem. However, there were some advantages in this.

One is that I could deal with intention without being overwhelmed at the same time by intervention. Second is that the limited examples allowed me a more precise focus, again without being overwhelmed.

My setting was also an advantage regarding the body language. In the field I did not pay much attention to it. Although my philosophical and theoretical framework of Language Games and Relevance Theory can deal with this aspect, I did not explicitly take them into account for analysis. I focused mainly on the audio recordings of the sessions, so the visual aspects of the paralinguistic communication were left outside.

Although I was also present taking notes, from my perspective important gestures were few. It could have been a limitation of the observer, but also is a condition of the setting. In general the situations involved seated people talking around a table. Consequently, the body language was controlled by the physical disposition of things. Hence, the amount of data for the analysis was again attenuated.

9.3.2 Conceptual Underpinnings

If I were starting this research today, perhaps I would like to put more emphasis on collective intentionality. This is because part of my answers at the end show that intentions were emergent, and I am convinced that there is an important role for the social interactions. However, this does not demerit my findings.

My search focused on how the actor/practitioner was affecting methodologies, and I think that my account of how that is done is a plausible one. So the problem of the collective intentionality is perhaps more an issue for further research and a different research problem.

A more problematic issue for my framework is emotion. My underpinning theories do not deal directly with the issue. For example, in Relevance Theory the mechanism is cognitive. One can use the mechanism saying that under certain emotion some ideas gain strength and are more relevant than others.

However, to really overcome the theoretical limitation, I think that it would be interesting to consider Maturana's (1988) work on consensual domains that intertwined reason and emotion. Another option could be Damasio (2000; 2004) whose work discriminates the roles of emotion and reason in decision making. This can be considered as another future research topic.

My last consideration is about power. I consciously avoided the topic in my research and in my interactions with my participants, although they were constantly demanding power inclusion. I considered that my topic was polemic enough without further complicating the issues in the setting. I am not denying that power was important. In fact, I consider that power seems directly linked to some of the roles of intentions, such as how the actions of the actors are caused, guided and sustained.

If I were to explore the connections of power and what I just presented I would follow Foucault (1982). He shows how power is linked with communication. Additionally, his notion of how some actions induce other actions mirrors the process of using intention to produce effects among the participants in an interaction.

9.3.3 The Quality of the Research Process

In general it can be argued that the research's own nature (about intention) pushed me on the self-reflective practice. Additionally, because I acted under some guidance of Action Research, I was having a good deal of participation and peer review of my ideas by a group of qualified researchers (see Chapter Five). This fulfils important conditions for the validity of the research such as creating a convincing account incorporating different perspectives, ability of the researcher to pass as a member and the validation of the analysis by the judgement of the participants (2000).

Guba and Lincoln (2005) propose the idea that caring about the quality of the research is a question of wanting to know if we have such confidence in the findings that we can act based on them. I want to examine briefly the implication of this to my thesis.

I am confident that I have shown a plausible way in which intentions work. I feel that this was also plausible for my participants, to the extent that they used them. Based on

this, more flexible and creative uses of methodologies are possible. This also lets me reinforce the idea that actor and ethics are fundamental in intervention processes and, consequently, in methodology use.

Regarding the use of these ideas to produce accounts and produce new methods and methodologies, I am confident enough to think that they are worth application. The particular articulation of ideas is novel for the field of MS/ST. In this scenario what they require is more research to strengthen a nascent approach.

APPENDICES

Appendix 1: Consent for Participation

Research Agreement

Consent to participation in the research "Practitioner's Intentions in Intervention Methodologies"

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered to my satisfaction. I understand that I may withdraw myself or any information I have provided from this project (even before data collection in completed), without having to give reasons and without penalty of any sort.

I understand that I will be assigned a pseudonym for use in any published work, unless I give specific permission for my name to be used. I understand that only the researchers will have access to information obtained, except in its published form. Organisations will not be named in publications, except with the written permission of the Chief Executive of that organisation.

I understand that the university retains insurance cover against claims relating to harm, loss or damage suffered by participants in research projects as a result of any negligent act, error or omission by or on behalf of the university.

I agree to take part in this research.

Participant's name	Researcher's name
Participant's signature	Researcher's signature
Date	Date

Appendix 2: Letter Presenting the Project to the Participants

April 4/2006

Dear TOP Team,
Re: PhD project "Practitioner's Intentions in Intervention Methodologies"

As you know I am enrolled for a PhD degree at Victoria University in Wellington. My research will require some fieldwork, which I would like to carry out with your research group. The research is subject to approval by the Victoria University Ethics Committee.

This research considers how various contextual factors including the purposes and intentions of the practitioner (or actor), can alter the rationality and application of the intervention methodologies and techniques used.

Frequently the management science/systems thinking literature asserts that an intervention methodology and/or technique should only be used in a technically 'correct' way. However I want to investigate whether there are alternative ways of using methodologies and/or techniques that are appropriate given different sets of circumstances. I am therefore interested in investigating a more flexible approach in carrying out interventions.

As philosophical and theoretical frameworks, I am planning to use the notion of language games in Wittgenstein's philosophy; pragmatic philosophy; language pragmatics; and boundary critique.

This research will use methods that involve ethnography, participant observation and interviews in which I will observe, take some notes and do some recordings. There is also an Action Research component that will involve feedback and discussions with the participants and the group.

In the interviews, in the first instance I will ask you some questions about your background and about your familiarity with various methodologies. I will also ask about your philosophy concerning interventions, for example the ethical and aesthetic aspects. Next I will be looking at how methodologies are used, for example how you choose one over another and what purposes are being pursued for that particular use.

These basic questions will evolve as the research unfolds.

The collected information will be kept in digital format under password protection for three years after the conclusion of the research. At the end of this period it will be electronically wiped.

Besides the information will be use for publication in academic or professional journals, academic or professional conferences and the thesis required for aspiring to the PhD degree.

Please, if you have any questions or comments about this project I am happy to respond to these. Contact details are below.

Kind regards,

Jorge Ivan Velez-Castiblanco
PhD Researcher
Victoria University of Wellington
Jorge.Velez@vuw.ac.nz

Professor John Brocklesby
PhD Supervisor
Victoria University
John.Brocklesby@vuw.ac.nz

Appendix 3: Interviews First Round

How interventions are informed?

- This requires asking about the academic background
- Professional background (arrival to intervention) (methodologies preferred)
- Theoretical background
- Experience (what is an ideal situation, what is a flawed situation)
- Ethical position
- Aesthetics
- Cultural position (especially this is a bicultural country?)

Human Dimension

- Purpose of HD
- Purpose of case studies
- Purpose National review
- Purpose Lit review
- Can a map be designed?
- How are you planning to arrive there?
- What methodologies can be use? Methods?
- Match pairs – Lit review framework

Appendix 4: Interviews Second Round

Diagram used in the interview for making sense of the plot of the project

*Like
*Desire
*Motivation
*Skill
*How
*Who
(External, Internal, interaction)

*Why / Reasons
*Elegant Vs Messy

*Power relations

Sessions

#14	Review of the subproject advance
#15	Designing questions to interview participants
#28	Designing First Workshop GWC
#29	Polishing First Workshop GWC
#30	Pre – First Workshop GWC
#31	Debrief First Workshop GWC
#35	Evaluation on Workshops
#36	Designing Second Workshop
#37	Polishing Second Workshop
#38	Nitty Gritty Workshop 2
#39	Content Issues Part 1 of 2: Subproject GWC
#43	Designing Workshop 3
#44	Preparing Advisory Meeting, Part 1 of 4: Subproject GWC

*Knowledge
*Believes
*Knowledge
*Plan
*Ethics-Agency

Methodologies
- Systems
- Public health
- TOC
- Simulation

Problems-Challenges

Difficulties – Frustrations
Alternatives why no?
Turning points
Coherence-Harmonizing
Luck
Wayward chains
Control

Māori World view
What is next?
Evaluation

General questions:

- What happened inside the GWC workshops?
- Aids used?

- How different was the workshop from the actual planning?
- Facilitation style?
- Do the team agree on the purposes for the GWC?
- What path of action to choose? It will be possible to arrive there?
- Is the purpose the same as the beginning?

Appendix 5: Soft Systems Methodology

This is an overview of the Soft Systems Methodology using textual citations from the book "Soft Systems Methodology in Action" (Checkland & Sholes, 1990). It deals with three areas: 1) the constitutive rules, 2) the epistemology use to guide and make accounts of the process and 3) a SSM model that represents the way to map SSM experiences.

1) Constitutive rules (Checkland & Sholes, 1990, p.286)

(1) SSM is a structured way of thinking which focuses on some real-world situation perceived as problematical. The aim is always to bring about what will be seen as improvements in the situation, and this is true whether or not the work done is part of normal day-to-day managerial work.

(2) SSM's structured thinking is based on systems ideas, and its whole process has yielded an explicit epistemology. Any account of work which lays claim to being SSM-based *must be expressible in terms of that epistemology* whether or not SSM language was used as the work was done. The epistemology is summarized in [**2) SSM's Epistemology**]. ('Expressible in terms of' does not mean that the whole process has to be followed each time SSM is used. But whatever gets done must be describable using the language of [**2) SSM's Epistemology**] regardless of the scope of it.)

(3) The full claim "SSM was used" (implying some version of the approach as a whole) ought to refer only to instances in which the following guidelines were followed.
    (a) There is no automatic assumption that the real world is systemic. If part of the real world is taken to be a system to be engineered, then that is by conscious choice.
    (b) Careful distinction is made between unreflecting involvement in the everyday world (the unfolding flux of event and ideas) and conscious

systems thinking *about* the real world. The SSM user is always conscious of moving from one world to the other, and will do so many times in using the approach.

(c) In the systems thinking phase, holons are constructed. (These will usually take the form of purposeful 'human activity systems' which embody the four basic ideas: emergent properties, layered structure, process of communication and control)

(d) The holons are used to enquire into, or interrogate the real world in order to articulate a dialogue, discourse or debate aimed at defining changes deemed desirable and feasible.

(4) Since SSM can be used in many different ways in different situations, and will in any case be interpreted somewhat differently by each user, any potential use of it ought to be characterized by conscious thought about how to adapt it to a particular situation.

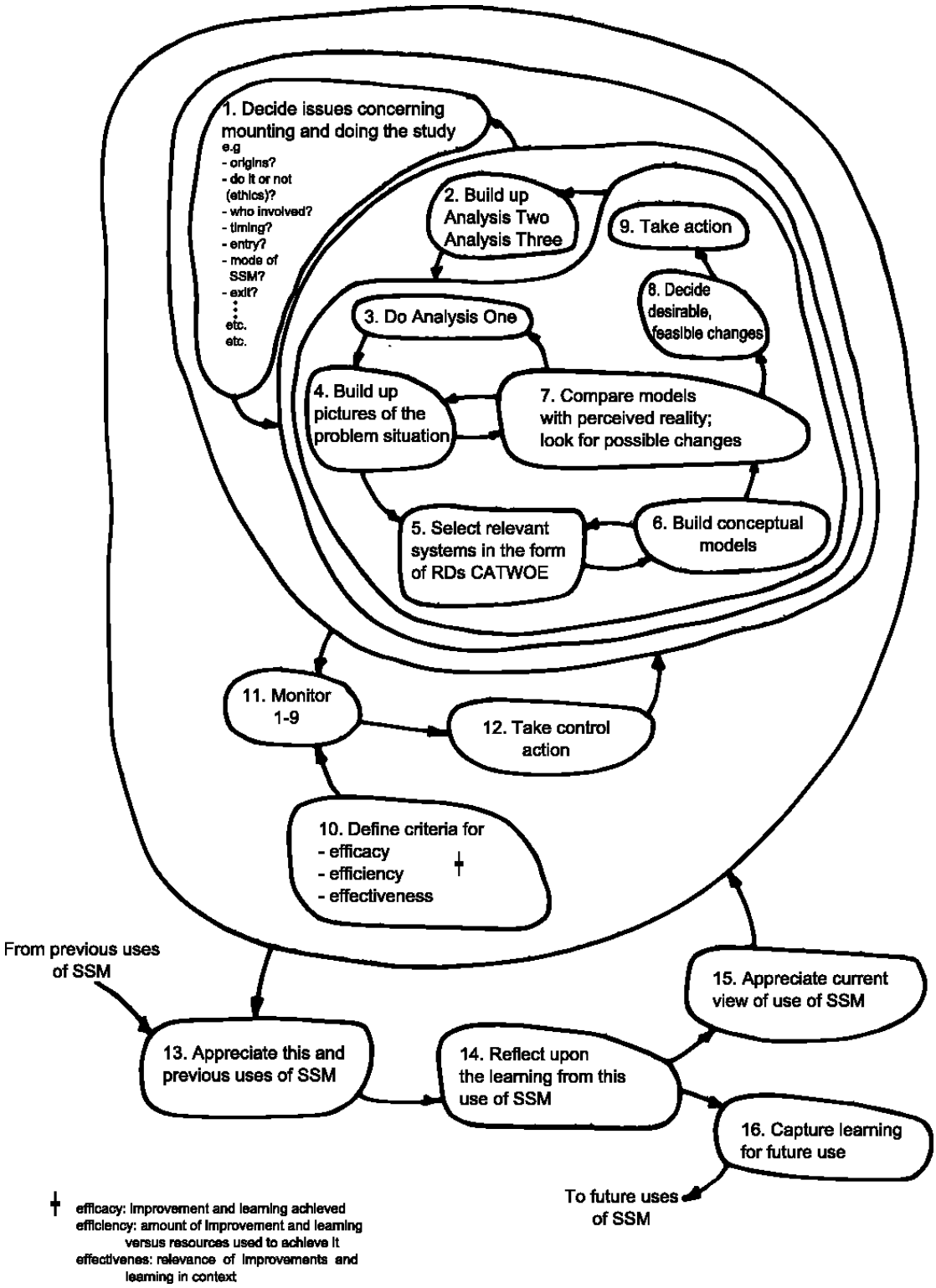
(5) Finally, and again because SSM is a methodology, not technique, every use of it will potentially yield methodological lessons in addition to those about the situation of concern. The methodological lessons may be about SSM's methodology framework of ideas, or its processes, or the way it was used, or all of these. The potential lessons will be always there, awaiting extraction by conscious reflection on the experience of use.

2) SSM's Epistemology (Checkland & Sholes, 1990, pp.288–289).

Real world	The unfolding interacting flux of events and ideas experienced as everyday life
Systems thinking world	The world in which conscious reflection on the 'real world'using systems ideas takes place.
Problem situation	A real-world situation in which there is a sense of unease, a feeling that things could be better than they are, or some perceived problem requiring attention.
Analyses One, Two, Three	Analysis One: examination of the intervention or interaction in terms of the roles; 'client' (caused the study to take place), 'problem solver' (undertakes the enquiry) and 'problem owner' (plausible roles form which the situation can be viewed, chosen by the problem solver'). Analysis Two: examination of the social (cultural) characteristics of the problem situation via interacting roles (social positions), norms (expected behaviour in roles) and values (by which role-holders are judged). Analysis Three: examination of the power-related (political) aspects of the problem situation via elucidation of the 'commodities' of power in the situation.
Rich pictures	Pictorial/diagrammatic representation of the situation's entities (structures), processes, relationships and issues.
Root definitions	Concise verbal definitions expressing the nature of purposeful activity systems regarded as relevant to exploring the problem situation. A full RD would take the form: do X by Y in order to achieve Z.
CATWOE	Elements considered in formulating root definitions. The core is expressed in T (Transformation of some entity into a changed form of that entity) according to a declared Weltanschauung, W. C(custumers): victims of beneficiaries of T. A (actors): those who carry out the activities. O (owner): the person or group who could abolish the systems. E: (the environmental constraints which the system takes as given).
The 5Es	Criteria by which T would be judged: Efficacy (does the means work?); Efficiency (are minimum resources used?); Effectiveness (does the T help the attainment of longer term goals related to O's expectations?); Ethicality (is T a moral thing to do?); Elegance (is T aesthetically pleasing?).
Conceptual model	The structured set of activities necessary to realize the root definition

	and CATWOE, consisting of an operational subsystem and a monitoring and control subsystem based on the Es.
Comparison	Setting the conceptual models against the perceived real world in order to generate debate about perceptions on it and changes to it which would be regarded as beneficial.
Desirable and feasible changes	Possible changes which are (systemically) desirable on the basis of the learned relevance of the relevant systems, and (culturally) feasible for the people in the situation at this time.
Action	Real-world action (as opposed to activity in conceptual models) to improve the problem situation as a result of operation of the learning cycle for which this epistemology provides a language.

3) "The System to use SSM which maps all the experiences of using it" (Checkland & Sholes, 1990, p.294)



Appendix 6: Data Catalogue

While in the field I gave three feedback sessions and attended a total of 43 work sessions. I am calling a session a chunk of time without breaks to work on an issue. Basically, a session corresponds to one recording. The amount of time devoted to these sessions varies from a minimum of 17 minutes to a maximum of 2hours 40 minutes. The typical session was about 1 hour. Sometimes they decided to spend a day's work discussing the project. In these occasions, I have from 3 to 5 recordings that I count as different sessions.

From the 43 sessions, 12 were specific to the GWC, and the other 31 sessions were dedicated to the project as a whole. I also conducted a total of 10 interviews. These were open interviews ranging from one hour to 1 hour 40 minutes. At the beginning, I interviewed every member of the team. Later I conducted a second set of interviews limited to those people working on the GWC project. The total recording time of interviews plus feedbacks and sessions was about 64 hours. The table at the end of this appendix specifies all the sessions that I recorded. The types of meetings recorded were:

- PFA: Project for analysis, a kind of meeting usually involving all the participants.
- VWM: Values in Water Management, a meeting involving one of PFA's sub projects.
- GWC: The Groups for Water Caring subproject was the focus of my research.
- Interviews: individual interviews with the participants.
- Feedback: Sessions in which I presented my views on TOP from the point of view of my research.

Apart for all this data, from which there is a "hard" record, I also attended some meetings that fell out of my negotiated boundary of research. Consequently, I was not allowed to take notes or produce recordings. They included 2 whole day meetings with the Advisory Group and 5 reflective practice sessions.

Session	Date	Type of Meeting	Attendants	Notes
#1	2005-10-05	PFA	Mark, Frederick, Gillian, William, Barbara, Dianne, Wanda, Grace and Jorge	Negotiating the research with the group and preparations to meet the Advisory Group
#2	2006-02-22	PFA	Wanda, Grace, Dianne, Mark, Barbara, Frederick and Jorge	Methodological issues - how to compare different case studies? Part 1/5
#3	2006-02-22	PFA	Wanda, Grace, Dianne, Mark, Barbara, Frederick and Jorge	Methodological issues - how to compare different case studies? Part 2/5
#4	2006-02-22	PFA	Wanda, Grace, Dianne, Mark, Barbara, Frederick and Jorge	Methodological issues - how to compare different case studies? Part 3/5
#5	2006-02-22	PFA	Wanda, Grace, Dianne, Mark, Barbara, Frederick and Jorge	Methodological issues - how to compare different case studies? Part 4/5
#6	2006-02-22	PFA	Jorge, Barbara, Grace, Wanda, Frederick, Mark and Dianne	Methodological issues - how to compare different case studies? Part 5/5
#7	2006-03-06	PFA	Wanda, Frederick, Mark, Grace, Dianne, Jorge and Barbara	Preparing Advisory Group meeting Part 1/2
#8	2006-03-06	PFA	Wanda, Frederick, Mark, Grace, Dianne, Jorge and Barbara	Preparing Advisory Group meeting Part 2/2
#9	2006-03-30	PFA	Grace, Wanda, Frederick, Mark and Jorge	Questionnaire to Evaluate Workshops
#10	2006-03-30	VWM	Grace, Wanda, Frederick, Mark and Jorge	Designing Survey Values in Water
#11	2006-03-30	PFA	Wanda, Jorge, Frederick, Miller, Laura, Dianne, Mark and Grace	Preparation for Advisory. Rehearsal Objective One and Comparison Methodology comparison of case studies
#12	2006-03-30	PFA	Mark, Grace, Wanda, Miller, Laura, Dianne and Jorge	Planning a Paper base on TOP's work
#13	2006-04-05	PFA	Mark, Grace, Frederick, Jorge and Dianne	Preparation for Advisory. Rehearsal Objective Two
#14	2006-04-19	Subproject GWC	Hannah, Dianne, Frederick and Jorge	Review of the subproject advance
#15	2006-05-02	Subproject GWC	Hannah, Dianne and Jorge	Designing questions to interview participants
#16	2006-05-05	Feedback	Jorge, Grace, Barbara, Hannah, Dianne, Mark, Gillian, Frederick, Wanda and William	Feedback about objective 1 and the oral and written culture in the group
#17	2006-05-30	Interview	Mark	Overview of the project
#18	2006-06-08	PFA	Mark, Grace, Dianne, Hannah, Wanda and Jorge	Annual Reporting to FRST Part 1/3
#19	2006-06-08	PFA	Mark, Grace, Dianne, Hannah, Wanda and Jorge	Annual Reporting to FRST Part 2/3
#20	2006-06-08	PFA	Mark, Grace, Dianne, Hannah, Wanda and Jorge	Annual Reporting to FRST Part 3/3
#21	2006-06-26	Interview	Frederick	Interview 1. Profile
#22	2006-06-27	Interview	Hannah	Interview 1. Profile
#23	2006-07-06	Interview	Wanda	Interview 1. Profile

#24	2006-07-13	PFA	Wanda, Grace, Hannah, Frederick, Mark, Barbara and Jorge	Methodological Issues
#25	2006-07-13	PFA	Wanda, Grace, Hannah, Frederick, Mark, Barbara and Jorge	Leadership and Management
#26	2006-07-13	PFA	Wanda, Grace, Hannah, Frederick, Mark, Barbara and Jorge	Data Analysis
#27	2006-07-14	Interview	Dianne	Interview 1. Profile
#28	2006-08-10	Subproject GWC	Hannah, Frederick and Jorge	Designing First Workshop GWC
#29	2006-08-17	Subproject GWC	Dianne, Frederick, Hannah and Jorge	Polishing First Workshop GWC
#30	2006-08-18	Subproject GWC	Hannah, Frederick and Jorge	Pre - First Workshop GWC
#31	2006-08-18	Subproject GWC	Frederick, Hannah and Jorge	Debrief First Workshop GWC
#32	2006-08-21	PFA	Barbara, Mark, Grace, Hannah, Dianne, Frederick and Jorge	Integrating the data from the different case studies Part 1/2
#33	2006-08-21	PFA	Barbara, Mark, Grace, Hannah, Dianne, Frederick and Jorge	Integrating the data from the different case studies Part 2/2
#34	2006-08-22	Interview	Barbara	Interview 1. Profile
#35	2006-08-30	Subproject GWC	Hannah, Mark and Jorge	Evaluation on Workshops
#36	2006-08-30	Subproject GWC	Wanda, Frederick, Dianne, Hannah, Mark and Jorge	Designing Second Workshop
#37	2006-09-08	Subproject GWC	Hannah, Dianne, Frederick and Jorge	Polishing Second Workshop
#38	2006-09-15	Subproject GWC	Hannah, Dianne, Frederick and Jorge	Nitty Gritty Workshop 2
#39	2006-09-28	PFA	Hannah, Wanda, Grace, Dianne, Mark, Jorge and Barbara	Content Issues Part 1 of 2: Subproject GWC
#40	2006-09-28	PFA	Hannah, Wanda, Grace, Dianne, Mark and Jorge	Content Issues Part 2 of 2: Case Studies and Objective 2
#41	2006-09-29	Feedback	Jorge, Grace, Taker, Note, Frederick, Dianne, Barbara, Hannah, Miller, Laura, Mark, Wanda, Gillian, Manager and William	Feedback based on communicative intention and boundary.
#42	2006-10-05	Interview	Grace	Interview 1. Profile
#43	2006-10-10	Subproject GWC	Hannah, Frederick and Jorge	Designing Workshop 3
#44	2006-10-12	PFA	Frederick, Barbara, Dianne, Hannah, Mark, Grace and Jorge	Preparing Advisory Meeting, Part 1 of 4: Subproject GWC
#45	2006-10-12	PFA	Wanda, Frederick, Barbara, Dianne, Hannah, Mark, Grace and Jorge	Preparing Advisory Meeting, Part 2 of 4: Subproject VWM
#46	2006-10-12	PFA	Frederick, Barbara, Dianne, Hannah, Mark, Grace and Jorge	Preparing Advisory Meeting, Part 3 of 4: Subproject Bio-solids
#47	2006-10-12	PFA	Frederick, Barbara, Dianne, Hannah, Mark, Grace and Jorge	Preparing Advisory Meeting, Part 4 of 4: Dissemination
#48	2006-11-08	Interview	Frederick	Interview 2. Intentions

				on Subproject GWC
#49	2006-11-13	PFA	Frederick, Barbara, Mark, Grace, Dianne, Hannah, Wanda and Jorge	Process Meeting Part 1 of 4: Subproject GWC
#50	2006-11-13	PFA	Frederick, Barbara, Mark, Grace, Dianne, Hannah, Wanda and Jorge	Process Meeting Part 2 of 4: Subproject GWC
#51	2006-11-13	PFA	Frederick, Barbara, Mark, Grace, Dianne, Hannah, Wanda and Jorge	Process Meeting Part 3 of 4: Debriefing Advisory
#52	2006-11-13	PFA	Frederick, Barbara, Mark, Grace, Dianne, Hannah, Wanda and Jorge	Process Meeting Part 4 of 4: Subproject VWM, Survey, Workplans
#53	2006-11-21	Interview	Hannah	Interview 2. Intentions on Subproject GWC
#54	2006-11-22	Subproject GWC	Frederick, Hannah, Dianne and Jorge	Designing Workshop 4
#55	2006-11-23	Interview	Dianne	Interview 2. Intentions on Subproject GWC
#56	2006-11-30	Feedback	Jorge, Dianne, Mark, Australia, Hannah, Miller, Laura, Gillian, Barbara and Frederick	Feedback 3 Based on Intention in Philosophy of Action

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