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Systemic
Conversations
among
Friends



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Sandro Luis Schlindwein
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Systemic conversations among friends



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Acknowledgments

This book is the result of a meeting of friends. It is impossible to reproduce here the intensity and richness of a meeting that was not only professionally challenging and transformative, but also very emotional. “And what is a [friends’] meeting if not an event, which in turn is a moment of opening, of destabilizing, of establishing new possibilities? A meeting erases the subject’s boundaries, moves them to another place”¹. And as Heinz von Förster has taught us with his Imperative of Change, “If you wish to remain yourself, change”! In fact, this imperative could well be the *leitmotiv* of these “Systemic Conversations”, that happened thanks to a network of relationships that have been conserved over time with a number of people.

Therefore, the realization of these “Systemic Conversations” and of this book would not have been possible without the support and confidence of my long time friends Antônio Pedro, (Renato) D’Agostini, (Teo) Fantini, Sergio Martins and Sergio Pinheiro. They all accepted without hesitation my invitation to spend a whole week in Praia Grande, despite not knowing exactly what was going to be done. Their friendship and support over the years is much appreciated. I also want to thank (Teo) Fantini and Sergio Pinheiro for their tireless help with the translations during the “Conversations”. My special thanks go to my friends Ray and Richard for having trusted me and accepted my invitation to make a long trip from England and Australia, respectively, to join the group of friends to participate on the “Conversations”.

¹ Bosco, F Meu gozo. In: *Granta em Língua Portuguesa* 1. Fronteiras, 2018, p. 209-217 [the translation from Portuguese is my own].

Without any doubt, their enthusiastic presence and engaged participation was decisive for the achievement of the objectives of the “Conversations”. Richard, and particularly Ray, have had a significant influence on my academic activities, and I’m very grateful for their friendship and support.

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Sandro Luis Schlindwein, March 2020

Preface

The idea of organizing these “Systemic Conversations” was born a long time ago, while thinking about how to bring together a group of friends to engage in reflexive conversations about entrenched academic practices, their epistemological assumptions and entailments. Behind that idea there was a growing feeling of discomfort with the rather timid or almost inexistent institutional initiatives at the university to reflect on such issues. A more detailed description of the rationale for organizing these “Systemic Conversations” can be read in Appendix 1.

But to reflect on those pressing issues it didn't seem appropriate and desirable to organize just another traditional academic discussion: the opportunity of doing something different differently could not be missed. Therefore, the “Systemic Conversations” were designed as a kind of retreat: to create a context fit to purpose, the group of friends met at a National Park in South Brazil not only to guarantee the necessary distance from daily academic activities, but also as an attempt of creating a reflexive environment amidst a quiet and enjoyable natural landscape.

The main content of the book (Chapters Two to Six) is composed by the partial reproduction of a book chapter previously published by one of the participants (Chapter Two) and by the transcriptions of the recorded conversations (Chapters Three to Six), edited only when strictly necessary. All the other parts of the book (including Chapter 1), as well as the footnotes added in Chapters Three through Six, have been included by the Editor. Although the main content of the book builds upon conversations that happened 9 years ago,

the issues covered by them have undoubtedly not lost their validity, and strongly relate to the concerns that gave origin to the “Systemic Conversations”. Therefore, the objective of organizing them has been largely achieved.

In systems terms, the “systemic conversations” presented in this book can be understood as an emergent property of a system of relationships driven and sustained by friendship. Therefore, this book is an invitation to the readers to join this system, widening its boundaries, and fostering the emergence of innovative, systemic conversations around the pressing issues of the unprecedented complex time we live in.

Florianópolis, March, 2020

Abstract

This book presents the transcriptions of the recordings of the conversations carried out by a group of friends gathered over five days at a national park in the south of Brazil, seeking to reach mutual understanding and broad agreement on a range of themes and issues of common interest. The content of the “Systemic Conversations” is therefore the emergent outcome of a conversational system. Starting with an account of one of the participants on his working experience framed as being an existential shock, the conversations unfolded over the following days exploring in more depth this notion and how to develop a method to experience such a shock. After participants have delivered accounts of existential shocks they may have experienced, the conversations evolved towards epistemological issues, and the importance of developing epistemological awareness in education and research has been highlighted. Among many other themes, the conversations also addressed the long lasting influence on university of positivist epistemological traditions and their consequences, including our departure from doing synthesis, and as they prevent or make paradigms shifts more difficult. The book is also an invitation to the readers to engage in reflexive conversations themselves, and it finishes with the participants reflecting about the experience of having participated on the “Systemic Conversations” and its influence on their being and doing in the world.

Keywords

Chapter 1: Systemic Conversations. Conversational System. Emergent Property. Friendship. Mutual Understanding.

Chapter 2: Existential Shock. Turbulent Experience. Learning. Sustainable Transformation. Uruguay.

Chapter 3: Shock. Professional Practice. Conceptualization. Transformation. Onto-Epistemology.

Chapter 4: Methodological Framework. Existential Shock. Rational Thinking. Happiness. Systemic.

Chapter 5: Epistemology. Epistemological Awareness. University. Positivism. Paradigm Shift.

Chapter 6: Closing. Thankfulness. Relationships. Reflection. Learning.

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I

Introduction

In the “systems community”, holding conversations is not something new. So, for example, the International Federation for Systems Research (IFSR) has established in 1980 the IFSR Conversations. Initially held in Fuschl, Austria (therefore in some circles these conversations are also known as the Fuschl Conversations), these conversations have been organized biennially on a regularly basis². Another example comes from “The End of the World”, in South America. Known as the “Conversaciones del Extremo Sur” (Conversations of the Extreme South), a Latin American version of the IFSR Conversations has been held in Ushuaia, Argentina, since 2012. All those conversations initiatives have been seen as an alternative to the classical conferences format because they allow face-to-face discussions, having also in common the desire of addressing “issues relevant for society and its environment” from a systems perspective.

But the interest that systems thinkers and cyberneticians have on conversation goes far beyond of being an alternative to the classical format of meetings, and it is based mainly on the relevance and implications that conversation has for

² More information about the IFSR and the IFSR Conversations can be found, respectively, at: IFSR. *International Federation for Systems Research*. Available at: <https://ifsr.org/> and at: International Federation for Systems Research. *IFSR Conversations*. Available at: https://en.wikipedia.org/wiki/International_Federation_for_Systems_Research#IFSR_Conversations. Accessed 31 March 2020. For a further account about the motivations that led to the introduction of conversations in the systems community as well as for a description of the conversation methodology that has been developed out of these motivations the reader is referred to: Dyer, G.; Jones, J.; Rowland, G.; Zweifel, S. The Banathy conversation methodology. *Constructivist Foundations*, v. 11, n. 1, p. 42-50, 2015.

human communication (“conversation is the basis of human communication”)³. Humberto Maturana goes even further by saying that “*we human beings exist, are realized as such, in conversations. It is not that we use conversations, we are a flow of conversations*”⁴. As it is only through conversations that we, human beings, can communicate, it is precisely this that the conversations have allowed to the participants of these “Systemic Conversations”: to communicate about the issues whose interest they share to reach a mutual understanding and broad agreement about them.

Why “systemic conversations”?

The word “systemic” is an adjective arriving from the word “system”, and it has been used together with nouns as thinking, practice and understanding (not to mention its use outside Academia and associated with different realms of professional practice). In all those uses, systemic relates to the attempt of using systems ideas to different contexts of human practice (as in thinking, practice and understanding). So, for instance, “to understand things systemically, literally means to put them into a context, to establish the nature of their relationships” (Ison, 2017⁵). By analogy, it can be assumed that conversations are systemic when the issues addressed by them are put into a context, when they are understood within the context of a larger whole, or when the nature of their relationships is established.

3 Conversation is of such importance that Gordon Pask, one of the early cyberneticians, developed a whole theory on the subject. Known as “Conversation Theory”, it is acknowledged as a “radical, cybernetic theory of education and communication” (taken from Glanville, R. and Müller, K. H. [eds.]. Gordon Pask, philosopher mechanic. *An introduction to the cybernetician’s cybernetician*. Viena: Edition Echoraum, 2007).

4 Ison, R. *Systems practice: how to act in situations of uncertainty and complexity in a climate-change world*. 2. ed. London: Springer. p. 96. 2017.

5 Ison, R. 2017. *Ibid*, p. 24.

Further, it can also be said that the “flow of conversations” that allowed the existence of these “Systemic Conversations” is systemic because:

- they are an emergent property or an emergent outcome of a conversational system
- they are the result and were structured according to the relational dynamic emerging among the participants
- the issues of interest were discussed from a systems perspective
- the issues addressed are in relationship with each other
- they are the result of “the interplay between brain, body and world”⁶.

Why “among friends”?

“Friendship [...] is enjoyed proportionally as it is desired; and only grows up, is nourished and improved by enjoyment, as being of itself spiritual, and the soul growing still more refined by practice”.

“Common friendships will admit of division; one may love the beauty of this person, the good-humour of that, the liberality of a third, the paternal affection of a fourth, the fraternal love of a fifth, and so of the rest: but this friendship that possesses the whole soul, and there rules and sways with an absolute sovereignty, cannot possibly admit of a rival”.

Montaigne, Essays, Of Friendship

“The rule of friendship means there should be mutual sympathy between them, each supplying

⁶ Based on Ison, R. (2017). Ibid, p. 89.

what the other lacks and trying to benefit the other, always using friendly and sincere words”.

Cicero

Much has been already written about friendship and the quotations above are just a few examples taken from famous classical authors on the subject. They highlight some unique features of friendship that precisely the design of the “Conversations” not only took into consideration, but intended to explore, and that is essentially systemic: to reach mutual understanding on a given subject of interest, fostering the complementarity of the different views and perspectives espoused by friends engaged in a conversation.

Further, since etymologically conversation relates to a turning together, it might be facilitated by friendship and the emotions it embodies as the following quotation taken from Ison & Straw (2020)⁷ in their definition of the term conversation suggests: *“the experience of understanding that is generated by the flow of emotions. Because the flow of our language and our emotions are so delicately interwoven, it follows that emotional matching is the precursor of semantic congruence. The meanings in the conversation will only match when the emotion matches [...] leading to widespread agreement [...]”*.

The unfolding of the Systemic Conversations

As mentioned in the Preface, these “Systemic Conversations” were designed with a certain resemblance to a retreat, aimed to assure to the participants a certain distance from daily activities and from familiar surroundings. Therefore, it was decided to carry out the conversations in a small municipality

⁷ Ison, R.; Straw, E. *The hidden power of systems thinking: governance in a climate emergency*. Routledge, 2020.

named Praia Grande, close to Aparados da Serra National Park, in the southern part of Santa Catarina State, in the south of Brazil (see Appendix 2)⁸.

The “Systemic Conversations” took place during a whole week from May 9 to 13 2011, and all the participants were accommodated in the same “Pousada” (a kind of Bed & Breakfast) that served also as the main venue for the conversations. There was a certain routine to be followed during the whole week, consisting of visiting different sites in Praia Grande and in the National Park in the mornings, having lunch in a local family run restaurant, and the conversations (most of them) in the afternoons at the “Pousada”.

The combination of conversations with outdoor activities organized in terms of a comprehensive “visit programme” to several sites and landmarks within and around Aparados da Serra National Park (see Appendix 3 and 4) is a distinguishing feature of these “Systemic Conversations” that needs to be highlighted. Originally planned as a leisure activity and to allow to the participants to know the local context of the canyon landscape of Praia Grande, those visits assumed a rather different role and gained importance with the unfolding of the conversations. Together with the reflexive discussions carried out during the conversations, they helped to structure the content and development of the conversations themselves (see, for instance, the unfolding of the conversations on Day Three – Chapter 4), and triggered also an emerging “contemplative capacity”⁹ of the participants. Therefore, in the

8 More information about the Park (with a touristic map in English) can be found at: ICMBio. Parques e florestas nacionais. Available at: <https://www.icmbio.gov.br/parnaaparadosdaserra/guia-do-visitante.html>. Accessed 31 March 2020.

9 Han, Byung-Chul. *The burnout society*. Stanford University Press, 2015. According to Han we live in a world poor of interruptions, what leads our civilization to a new barbarism. And therefore, belongs to the necessary corrections to be taken, to strengthen the contemplative capacity, which presupposes a specific form of seeing – and which I claim needs to be systemic!

context of the “Systemic Conversations” the visits turned to be a device to facilitate conversation and reflexive behaviour.

The conversations were carried out in an extreme friendly and relaxed atmosphere, with lots of joking and laughing. Not to mention that there was an unrestricted freedom to agree or disagree on any issue that was being discussed or to suggest a different one, the inexistence of fear of being criticized or excluded from further conversations, and the pleasure and satisfaction of participating in them. Sometimes they also were very emotional and unfortunately all this can hardly be captured by the transcriptions of the recordings of the conversations presented in Chapters Three to Six. As Richard has expressed recently (personal communication, March 2020) “*the whole experience was wonderful with its essence of holism if you will, with the music and singing and the eating together, and the pairing off in walks in the canyons, all being as important, I feel, as the conversations themselves*”. In other words, the “Systemic Conversations” were much more than just conversations, in a clear example that “the whole is different than the sum of the parts”. The “Conversations” had, therefore, its own systemicity¹⁰ emerging from the wholeness of the activities jointly carried out by the participants (see photo album in Appendix 4).

Therefore, it can be said based on Krippendorff (2009)¹¹ that the Conversations were authentic conversations because the participants have experienced the conversations as:

10 Term used by Peter Checkland to characterize the systems perspective of a particular systems approach. See Checkland, P. *Systems thinking, systems practice*. John Wiley & Sons, 1999.

11 Krippendorff, K. Conversation. Possibilities for its repair and descent into discourse and computation. *Constructivist Foundations*, v. 4, n. 3, p. 138-150, 2009. Krippendorff's essay expresses the hope “for not closing off the possibility of returning to authentic conversation where humans realize their being human, rather than institutional actors”. Eventually, these “Systemic Conversations” are an example of how circumstances may be created to make this happen.

- occurring in the presence of addressable and responsive individuals
- maintaining mutual understanding
- self-organizing and constituted in the contributions their participants make to each other
- intuitive, not rule governed
- dialogically equal
- creating possibilities of participation
- irreversible, progressive and unique
- coordinating constitutions of reality
- continuable in principle.

And furthermore, as Krippendorff (2009) notes, “authentic conversation is typical among trusting friends”.

Unpacking the conversations – the transcription of the recordings

Unlike the visits, there was not a “programme” previously prepared for the conversations consisting, for instance, of a range of issues or themes to be addressed, although there was an expectation that certain issues of common interest would emerge with the unfolding of the conversations. So, absolutely nothing was planned, prepared or formally presented (See the Rationale in Appendix 1). The plan consisted of not having a plan. In this sense, as has been said, the conversations that are presented in Chapters Three to Six are truly an emergent property of a conversational system.

With the exception of the first day, in all the other days the conversations were recorded, and their transcription is

presented here without major modifications or editing¹². With the faithful transcription of the recordings it is intended to present the conversations as they actually happened, while also preserving as much as possible the intonations and cadences of spoken language. Nevertheless, to ensure clarity of understanding of what was being discussed, a slight editing of the conversations was necessary whenever there were in the recordings many overlapping voices or when the recording was inaudible.

Starting with a sort of testimony Richard gave at Day One (see Chapter 2), which revealed to have a significant influence on the conversations that unfolded in the following days, different issues and themes were addressed in the “Systemic Conversations”, as for example the design of a method to experience an existential shock, paradigm change, the role of universities in contemporary world, on the nature of systems thinking, to mention but a few. Although not all of those issues and themes have been addressed in depth during the conversations, they are “continuable in principle” and may be conceived as starting points for further, in-depth conversations. Regarding to the content of the conversations, the reader is warned that no further interpretation or discussion about them will be made in this book. Therefore, the invitation is made to the reader to engage reflexively with the conversations, becoming not only aware of the far reaching onto-epistemological implications of the issues addressed by them, but also seeking to foster new “authentic conversations” from them.

12 Mistakes in understanding the recordings during transcription are my sole responsibility.

The systemic conversations

II

Day one: Monday, May 9, 2011

Since a formal programme consisting of issues or themes to be addressed by the “Systemic Conversations” had not been deliberately prepared (see Introduction and Appendix 1), at Day One Richard took the initiative and told the participants about his working experience in Uruguay in the 1970’s, framing it as an example of an existential shock. Richard’s account proved to be extremely insightful to foster the “Conversations” and their unfolding over the following days, as can be easily seen in the transcriptions of the conversations in the pages that follow. Unfortunately, for Day One of the “Conversations” there is no recording available. Therefore, aiming to give to the readers an idea of what Richard has told the participants, it was decided to include in this book (following his suggestion) part of a book chapter he has published almost at the same time as the “Conversations”, and where an account of his working experience in Uruguay is provided.

The text that follows is reprinted from: Bawden, R. (2012). *Systemic action research, turbulence and emergence*. In “Action Research for Sustainable Development in a Turbulent World.” Chapter 3. O. Zuber-Skerritt (ed). © Emerald Publishing Ltd.

“[...] While there have been many stages to my metamorphosis over time, I certainly can identify one specific two-year period in my professional life during which I lived and worked in Uruguay in South America, which did represent a watershed in my eventual emergence as an action researcher – albeit without me recognizing it at the time. What I did appreciate, as I moved on from that relatively brief project in South America working with the Food and Agriculture Organization (FAO) of the UN was that my life would never be the same again: And so it has indeed transpired.

In essence, it took a series of existential shocks in combination with an exposure to intellectual constructs and worldviews that were both entirely novel to me at the time, to set me off on a career (and indeed life) trajectory totally different from the one that I had enjoyed to that point. Not only was I exposed to a level of turbulence that had been of a quantum order higher than anything that I had experienced prior to it. I also discovered a number of sets of ideas in a literature previously unknown to that allowed me to understand the significance of the chaotic disorder about me, while giving intellectual clues about how I might manage and exploit that chaotic disorder in the cause of ‘sustained betterment’ through development.

It’s not that I was unaware of the turbulent nature of the world about me before that experience in South America. I can claim, with ample empirical evidence to support it, that I have long had a profound appreciation of environmental turbulence. Indeed with a childhood spent on a farm in the western region of, what was at the time, a war-ravaged Britain, it could be asserted without equivocation, that I was probably ‘born and bred to it’. No one who experiences the devastating impact of a sudden thunderstorm on a summer crop that is about to be harvested, or

the lethal effects of winter gales on livestock out in the fields, could remain unconscious of the often disorderly confusion of the bio-physical world. In related vein, nobody who has been a member of a family trying to earn a living through farming would be immune to the capriciousness of the market places for the commodities that farmers produce. The socio-cultural world too, is inherently turbulent. And for sheer scale of chaos and disorder, there is little to match the terrible dynamics of a 'world war' with its aerial bombardments, artillery battles, death, destruction, and utter social disruption.

*Yet for all this as existential background, it took my two year sojourn working in Latin America for me to really confront the adequacy of my beliefs and the relevance of my practices as a researcher in the face of a level of turbulence that, to this day, haunts me yet. I was extremely fortunate to have a wonderful wife, an appreciate boss, and three extremely talented 'counterpart' scientists to help me through this period in my life. It was also my great fortune to have received, as a gift from a friend and UN colleague outside my project, a copy of *Pedagogy of the Oppressed* by the Brazilian scholar Paulo Freire, who had been forced to leave his native land as a result of the reactions to his ideas by those in power. Sadly I received this gift just six months or so before I left Uruguay to return to academia in Australia: But it certainly was a case of 'better late than never' for the ideas in this book were to have a truly revolutionary impact on me and indeed they served as a conceptual motivation to me to fundamentally change the direction of my career back in Australia.*

Within twelve months of my return to my homeland, I found myself the elected Dean of the Faculty of Rural Science at the same university from which I had sallied forth to Uruguay three years earlier on my UN secondment. My election platform for that

post precisely illustrated the learning that I had gained through the synthesis of reflections on my two years of truly turbulent experiences in Uruguay with a host of conceptual understandings born essentially from the writings of Freire.

It was through reading *Pedagogy of the Oppressed* (Freire, 1972) that I came to comprehend the true nature of oppression and to appreciate the extent of that in Latin America, as elsewhere in the world. In that manner I also came to appreciate both the dialectical and democratic natures of dialogue and to grasp the vital significance of critical reflection to learning for action for responsible and inclusive development. Most tellingly of all, I came to comprehend and thence embrace the nature and significance of praxis – of concrete, practical, willed action critically informed by both theory and abstract reflection on its consequences. Educational reform, I came to realize, should not be confined merely to changes in the curricula for university undergraduate and graduate students in agriculture. Nor did it relate entirely to a reworking of research methodologies and agendas for the academics. More basically, it meant mounting serious challenges to the very role that institutions like colleges of agriculture and universities played in the development of people in rural areas in concert with the environments in which they had to live and operate. It meant transformed and transformational praxis.

Sustainable actions in the world would come about only through sustainable transformations in the way people came to ‘see’ their worlds, as the necessary pre-requisite for coming to ‘act’ in it in ways which would prove to be more considered, responsible and, hopefully, sustainable. Ontological, epistemological and axiological aspects drawn from systemics represent holo-centric perspectives for seeing and valuing the world and events in it, differently from those of the prevailing techno-centric paradigm.

A Latin Retrospective

There was little indication of things to come when I started my work as a ‘technical expert’ at the Central Veterinary Research Laboratory in Uruguay, while on leave from my academic post as a senior lecturer in parasitology and agro-ecology at the University of New England in Australia. I had been recruited to work with three Uruguayan ‘counterpart’ researchers in that laboratory to establish and develop protocols, agendas and methods appropriate to the identification and control of particular parasites. These parasites were responsible for very significant impediments to the productivity of the livestock industries that were so crucial to the economy of that country – and thus to the well-being of its citizens.

I was full of confidence as I started work in my new post: I was a parasitologist, I told myself, confident in my knowledge of the technicalities of the task ahead of me. What I certainly didn’t appreciate at that time, in spite of a background in epidemiology and in agro-ecology and a fleeting acquaintance with systems concepts and principles, was how relatively trivial the technical aspects of the project would prove to be. I’d had some experience in computer modeling of the dynamics of parasites and had an appreciation of the ‘systems idea’ and the significance of system/environment interactions as a consequence. In particular, I was conscious of the view of Caswell, Koenig, Resh and Ross (1972) with respect to the importance of the role of the observer in systems science as the arbiter of the boundary of any system-of-interest. Systems weren’t given, they were selected, as were the environments in which they operated: A system, they argued, was “a collection of objects each behaving in such a way as to maintain behavioral consistency with its environment which, of course, may include other objects in the system” (Caswell et al., 1972, p.7).

On the ground in Uruguay it would not take long for the true complexity of the matter to emerge with a host of unpredictable factors, particularly those associated with human involvement, influencing the dynamics of the parasites that were enzootic to the country. Informed particularly by my familiarity with systems ideas – cursory although they still were at that stage of my career – I designed a ‘systemic schema’ as the conceptual and methodological framework for our project (Bawden, 1979). In its compass, it was essentially diametrically opposed to conventional approaches to the study and control of parasites – most especially by the veterinary scientists of the day. In spite of their veterinary education background, however, my three colleagues enthusiastically embraced the ideas that we should take a systems approach to the matter. And that would mean investigating the dynamics of the populations of key parasites of sheep and cattle from a perspective that recognized the significance to their life systems, of interventions by humans who were expressing a host of different motivations – be they social, political, economic, cultural or of any other human motive.

I owe a particular debt of gratitude to my three Uruguayan colleagues (and warm friends) for facilitating the development of my critical consciousness with respect to the particular system/environment interactions that characterized livestock production in Uruguay. It was they who triggered my conscientização, as Freire would have called my “learning to perceive social, political and economic contradictions and to take actions against the oppressive elements of reality” (Freire, 1972, p.35). As it happened, my counterpart colleagues and I had actively engaged with ‘social, political and economic contradictions’ almost as soon as we had started working together, even though, as will soon become apparent below, there were very considerable risks for all of us in doing so, and very real dangers to them. It was one thing to develop such

a systemic perspective and to win its acceptance both within the National Laboratory as well as within the FAO-UN community that was responsible for the oversight of the project. It was quite another to enact this perspective. Indeed, as it would transpire, the enacting would prove to be an almost impossible task.

Uruguay was a very turbulent nation in 1974 – the year when I arrived, with my young family, to assume my appointment. Or perhaps more accurately, it was a country of ‘suppressed turbulence’. Less than 18 months before we took up residence in Montevideo and I started my work at the laboratory relatively close by, the military had put a violent end to a decade-long period of extreme political and socio-cultural disorder. This violent turbulence was an emergent characteristic (a systemic property, one might say) of the activities of a national group of insurgents in pursuit of their aims (originally, as they had claimed, to redress the appalling inequities and rank poverty in their society) and of their clashes with police and soldiers in their efforts to restore law and order. At the time of our arrival, the fear was still very palpable that the country would descend again into the chaos that had prevailed from the early 1960s when the Movimiento de Liberación Nacional had first begun its activities with robberies of banks, gun shops and armories. Kidnaps and assassinations of prominent people of the establishment would follow over ensuing years. Here the insurgents seemed to stray very far indeed from their founding ideals of peacefully alleviating poverty, social inequities and corruption. They had seen these sources of turbulence as endemic in a country with, unusually for that continent, a very high level of literacy and a proportionately large middle-class. In their response to the uprisings, the police and the army resorted to mass arrests, torture and their own assassinations and murder.

The history of the self-styled Tupamaros freedom fighters (or guerrillas as they were to their adversaries) is well told in a

number of accounts to be found on the web, including the sites: <http://latinamericanhistory.about.com/od/20thcenturylatinamerica/a/tupamaro.htm> and <http://www.latinamericanstudies.org/uruguay/tupamaros-uruguay.htm>.

The military had come to power after the Tupamaros had been repressed in 1972, and the civilian president elected by general election in the previous year ceded power to them in what was essentially a coup.

The relevance of this political history to our project in parasite management was that, while convincing arguments could be made to adopt a systemic, integrated disciplinary approach to parasite management in Uruguay, the political and socio-cultural environments across the country in the mid-1970s, and especially within its institutions, made this approach exceptionally difficult to conduct. Ironically it had been the collapse of the vital beef cattle and sheep enterprises through a series of complex matters that had led to such socio-economic unrest in the early 1960s in the first place. This was within our province. We were, however, effectively banned from interacting with any other institution that could have added substance to the social, cultural, economic and political dimensions of our researching quest for sensible and responsible parasite management. Even worse was that it was actually illegal for my national counterparts to brief me on their country's recent history and current socio-political status while we were all within the country. Even particular words like 'Tupamaro', 'insurrection', and worst of all, 'revolution' were on an explicitly banned list: One could be arrested for even mentioning them. We could not conduct any discussions beyond the mere techno-scientific features of our work with confidence that we would not be reported to the authorities.

Finally, by the accepted protocols of FAO, we were actively discouraged from involving ourselves in anything beyond the

strictly limited technical aims, objective and performance indicators of our project. Working within a direct context of the alleviation of poverty among small livestock producers with very limited resources was not within our mandate.

The long field trips in our white pick-up with its distinctive blue UN badges emblazoned on the doors provided the safe vehicle (!!) for our eclectic discussions. What a haven and a hotbed of ideas (and emotions) that enclosure provided. It would prove to be the crucible for the bonds of friendship and trust that would develop between us – and to the significance of ‘the group work’ as an action researching system that I would – finally – come to appreciate. The significance of experience as a source of learning, particularly in turbulent times, would come into very sharp relief while the gross inadequacies of positivist/reductionism for inclusive, systemic development would also be highlighted in the extreme.

And then came my introduction to the writings of Paulo Freire and after that, all the elements of my personal revolution would begin to fall into place. Two years working under the undeniably difficult conditions of a garrison state provided the ultimate trigger for my transition from classical experimental researcher to participative action researcher. Of great importance to me in this ‘phase transition’ was that this period also marked the transformation of my worldview from one that supported my work in positivistic science to one that would encourage me to work in what I would come to call systemic development.”

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III

Day two: Tuesday, May 10, 2011

The conversations were resumed on the second day, exploring in more depth the notion of existential shock that Richard had introduced the day before when reporting his working experience in Uruguay. As the conversation unfolded, and a set of related issues were raised, the discussion evolved towards the development of a method (or the design of a learning system) to experience an existential shock. The conversations of the day finished with the participants delivering accounts of possible existential shocks they may have experienced.

D'Agostini – Richard, how do you evaluate the possibility that professionals with many years of professional practice might become aware that in some moment they have had a shock?

Richard – I think that I said yesterday that we have shocks all the time. As you [referring to Sergio Pinheiro]¹³ said in the car¹⁴: they are like the remote control. We [inaudible] a comment, we turn off to change to something else. If I use my example from Uruguay¹⁵ as a metaphor, there was no escape. I couldn't turn off. And I think the metaphor of the remote control is a very good one, and so the challenge is to stop people turning off. It is shocking to see a glacier pitch fall apart.

Ray – In our car I was offering a reflection on Richard's example¹⁶. And my reflection was to think about what is it that we will have to experience to claim we experience a shock. And it seems to me that in case of Richard there were two thesis. One was deeply self-emotion, emotion of fear. And the other one was the possibility of choice, in which the choice that Richard made was the conservation of relationships.

Sandro – But is it possible to say when we look at our organizations that a lot of people have never experienced a shock in their whole life? If you look how organizations are, you will conclude that only a handful of people have experienced a shock, and have changed with it; that have been transformed by it.

13 Throughout the text, what is enclosed in brackets has been included by the Editor.

14 For the necessary displacements to Praia Grande and in the Brazilian National Park of Aparados da Serra where the conversations took place, the participants were distributed in two cars, and Richard is mentioning what Sergio Pinheiro said in the car they were in.

15 Richard is referring to his working experience in Uruguay described in Chapter 2.

16 Ray is referring to what Richard has told the group as an example of an existential shock, described in Chapter 2.

Richard – But I think that the other really important part is not just the shock. Is that you do something different about the shock then will move forward. You are transformed. It is not just ahhh and then you carry on. If I keep doing that it is going to be something. So if we take issues... anthropogenic change to anything, resulting anything whether it is raising water tables with deforestation or climate changing world. If you just say ohhh... sh...! It is happening! But then you keep doing the same stuff...

Ray – My hypothesis would be that the reason why Richard's program¹⁷ got better when the mature age students came in, is if they have had experiences of similar nature...

Richard – Exactly!

Ray – ...rather than the undergraduates, back in school.

Sandro – This seems to be similar to what happened in our postgraduate program. When we started our postgraduate program in Agroecosystems¹⁸ we got a lot of students from EPAGRI¹⁹, for instance, students who have had a previous professional experience. And this changed when we began to receive students coming directly from the undergraduate level.

Richard – The phrase that [Marcia] Salner uses is existential shock, which means that it has to be a shock to

17 Ray is referring to “the Hawkesbury systems initiatives in agriculture” in which Richard had a leading role [for further reading about this initiative the interested reader is referred, amongst others, to Bawden, R. The Hawkesbury experience: tales from a road less travelled. In: Pretty, J. (ed.). *The Earthscan Reader in Sustainable Agriculture*. London: Earthscan, 2005, p. 148-172, and to Bawden, R. J.; Macadam, R.D.; Packham, R.G.; Valentine, I. Systems thinking and practices in the education of agriculturalists. *Agricultural Systems*, v. 13, p. 205-225, 1984].

18 PGA = Programa de Pós-Graduação em Agroecossistemas [Postgraduate Programme in Agroecosystems] of the Federal University of Santa Catarina, in Florianópolis, Brazil. More information (only in Portuguese) about the Postgraduate Programme can be obtained at: UFSC. *Programa de Pós-Graduação em Agroecossistemas*. Available at: <http://ppgagro.posgrad.ufsc.br/>. Accessed 4 March 2020.

19 EPAGRI = Empresa de Pesquisa Agropecuária e Extensão Rural de Santa Catarina [Agricultural Research and Rural Extension Service of Santa Catarina State].

your existence, not just a frightening ohhhh... and again the Uruguayan case, from the position I was in, couldn't have been promoted.

Sergio Martins – I would like to discuss two issues. One, that impressed me, is about the story Richard has told²⁰. Even in case when the shock happens, it is not always possible to make choices. An opportunity of change might not be given due to a limiting issue, like an economic issue, for example.

Richard – Thanks for Ray's interpretation of the importance of his request [inaudible], I haven't thought about that before. I haven't thought about it enough to know and answer to the questions.

Fantini – At that time, I mean.

Richard - I thought about the possibility of shock. For me the connection is not necessarily between the event and the conceptualization to *transformación* [transformation]. For me, in that case, it was Freirean²¹. The way I was doing is not right. I'm just making the rich, richer!

Sergio Martins – I understood that. The difficulty I'm referring to is objective, of a professional who perceives this and does not have, let's say, an alternative; he/she is from an economic point of view in a limit situation that imposes to him/her keep doing the same thing.

Richard - It is now an ethical issue. It is now my responsibility to try and find something, to do something about it.

20 Sergio Martins is also referring to Richard's account of his working experience in Uruguay described in Chapter 2.

21 Reference to Paulo Freire (1921-1997), author of *Pedagogy of the Oppressed*.

Sergio Martins – And there is a second issue that seems to have happened with them [referring to Richard and Ray] in Australia. A group of professors in a given context of a school has a shock, wants to propose changes, but the students in this context do not want the changes. Following Richard's words, they have another ethical stance, not that of the group of professors.

Richard – Then it is the moment of judgment. The moment of judgment stays, roughly, in terms of my own energy level, my own commitment. Do I stay with that and try to change it, whatever the context, or do I invest in somewhere else?

Sergio Martins - But this is a difficult decision, for example, for us academics of a Federal University [in Brazil]. There are not many options left. It is not easy to abandon, for example, the university, and try to do something else.

Richard – I agree!

Antônio Pedro - Sergio [Martins], in my opinion the majority of the shocks does not have consequences. The majority of them are not explored, due to personal or institutional reasons, or due to the prevailing beliefs. Perhaps we get anxious because how can we, who are aware of this, leave these conversations we are having here, Sandro, and to acknowledge the shock, to manage it and to perceive its consequences.

Sergio Martins - I agree!

Richard - There is a third [inaudible], a very important one. The shock, the consequences and the conceptualization. Actually to see the shock from a different perspective. If you just see it in terms of a choice... And for me this is the challenge with university and society. And central to it is what I've been saying about conversation. There is no truth.

Antônio Pedro - That's important.

Ray - If I reflect more on this conversation, I mean I agree with what has been said, but you could claim Richard's colleagues²² were very clever, perhaps not purposely, because they offer him three choices. Three choices is an invitation not a demand.

Sergio Martins - They were transparent.

Richard - And they made the conceptualization easy.

Fantini - Richard, would you have a fourth choice, for example?

Richard - Oh, lots of choices!

Ray - The reason why the on farm trade of the program at Hawkesbury went so powerful was that the students had to conceptualize the operation of a human activity system in Checkland²³ terms. When you change those boundaries you have to admit all sort of issues like domestic violence, sexual assault, other sort of issues. And the danger was if we release students without support in those cases. An important issue was to have a system of support in place. And this is a totally emergent support. Perhaps allowing for people to get near the end of their career is to provide a support and venturing for people who wish to do things differently.

Antônio Pedro - But Richard, considering your situation in Uruguay, you could make any decision, you could do anything, right?

22 Ray is referring to Richard's colleagues during his working experience in Uruguay described in Chapter 2.

23 Ray is referring to Peter Checkland, known for having developed Soft Systems Methodology (SSM) and author of the book Systems Thinking Systems Practice.

Richard – That’s another choice. I would argue in every situation there is choice. Always. But there are consequences, as you say. And that is systemic. So you are not linear in saying I take this choice rather than that choice systematically. I’m saying I’m taking this choice over that choice we gonna think about [inaudible] in every [inaudible].

Sandro –And to take responsibility for the consequences of your choice.

Antônio Pedro – Whatever you do will always have consequences.

Richard – Doing nothing has consequences.

Sandro - I think it is not so uncommon to be asked for advice. Somebody comes to you and asks what to do in a given situation. And I think that a good answer is to say: well, you have many choices and you must be aware of the consequences of your choices and to take responsibility for them.

Richard - That’s exactly the response.

Sandro - Because I can’t make a choice for someone else, but I can make people aware that their choices have consequences.

Antônio Pedro – Exactly.

Richard – Another question, in brackets. Is Paulo Freire²⁴ recognized today in Brazil and is he listened to?

Ray - We had this discussion last night.

24 About Paulo Freire see footnote 21.

Fantini - I tell you that at the university level you gonna see a lot of thesis, many, many research projects based on Paulo Freire's theories. In Academia you see a lot of this.

D'Agostini - Let's say he has been the subject of many studies.

Sergio Martins - In my opinion Paulo Freire's theories have not been assumed institutionally by the Brazilian universities although several groups are acting based on Paulo Freire's theories.

D'Agostini - But it seems that society does not operate in this way.

Sergio Martins - Especially in the education of teachers.

Fantini - This is also my opinion. It's more an academic issue than, you know, having groups using Paulo Freire's theory as a framework to do something really out in the field.

Antônio Pedro - We have a Paulo Freire's theory; not a Paulo Freire's practice.

Sergio Martins - Yes, but I would say that some groups are practicing the theories of Paulo Freire.

Fantini - I give you an example. Sergio [Pinheiro] and I have a post-doc researcher working with us in a project. Her PhD thesis is about Paulo Freire's educational theory. She joined the group hoping to put into practice what she has learned. What has she done so far? Regarding Paulo Freire's theory and everything she learned during her formal education as a PhD student, almost nothing. But that was her purpose [to put into practice Paulo Freire's theories]. She told me explicitly "I'll try to do something brand new".

Sergio Pinheiro – In EPAGRI's project²⁵ it is exactly the same thing. Her project with CAPES²⁶ was to search for those more participative investigations, to analyze them under Paulo Freire's theory and also to implant, or to help new experiences under this perspective. When I was in Australia I was surprised with the amount of citations about Paulo Freire.

Sergio Martins – And Paulo Freire's books are still being sold in thousands.

Richard – When I think about that experience I have been since I talked about it yesterday²⁷, is the combination that I was aware of [Paulo] Freire at the time that I had my shock. So I don't know what to say what I would have done if I wasn't aware. So in the end for me Paulo Freire was a liberate. He will tell me: you are now conscious of something quite different. Otherwise I would've never thought about it.

D'Agostini - But Richard had said two things that afterwards became separated: the shock and the theory. Yesterday I learnt a lot of what happened with my professional life, listening to him. With due proportion, what he was saying was analogous with what happened to me. I was living with people who to some extent were willing to think, or at least, who thought that think differently. Or were trying to think differently. It's a group that wanted to change the way of thinking in their midst. I even told you what I have identified as being my shock, and I tried to talk, with some difficulty, of

25 The Project Sergio Pinheiro is referring to is the same project Fantini was mentioning in his account about the research being done by the post-doc researcher.

26 CAPES = Coordenação de Aperfeiçoamento de Pessoal de Nível Superior [Coordination of Improvement of Higher Education Personnel] is a foundation of the Ministry of Education of the Brazilian Federal Government in charge of the expansion and evaluation of Postgraduate Programmes in Brazil.

27 Richard is referring to his experience in Uruguay as it can be read in Chapter 2.

some attempts of constructing of what Richard identified as a theory. Richard was trying to build a theory, remember?

Richard - Yes. Well, I was illustrating other theory.

D'Agostini – Remarkable was what Ray said “I also had a shock”. Thus, the issue is if change, or the possibility of change, needs a shock and a theory to be reoriented.

Richard - There are two others I will now add. One you already mentioned that is the idea of consequences. So you condition your theory with consequences. And the fourth one is related to the Indian economist Amartya Sen who said you must provide resources. So Shock – Theory – Consequences – Resources.

D'Agostini - But I will keep myself only in the shock and in the theory, the remainder is consequence. During dinner [last night] you said Richard, that the effort should not be to change ourselves and the university, but that we were capable of changing the world.

Richard – And change ourselves! And then if the university changes as a result of this, so do we. That is not the point either. Our relationship is our relationships with the *pueblo*, with the people.

Antônio Pedro - Richard, which is the role of the university in this situation? We want to change the world but we are inside the university, which I think is a very good instrument to change the world. How to do this?

Richard - Let me answer personally. I wanted to be a rector. That was my aim in life. And I wanted to be the Head of the University to do what we did in our Faculty. I didn't succeed. So, should I try again? Or do I say is not important?

D'Agostini - Richard, then shock is not enough.

Ray - It is necessary but not sufficient.

D'Agostini - It is necessary to have a theory coherent with the shock. Until yesterday I was not aware that both – the theory and the shock – were linked.

Ray - I mean, this is a very interesting conversation. Richard's four points. I wonder if you change shock to experience of a particular track, I mean, if you are reflexive you can experience the inadequacy of theory. And you can reflect on the consequences of your actions, and you can reflect on the adequacy of the context. That brings us almost back to the juggling ball which is an organizing idea in my book²⁸ or in our course²⁹.

Richard - I'm still convinced that without the shock, the experience is not enough, and the reflection is not enough.

Ray - But I've had an experience of a different type.

Richard - Indeed!

Fantini – Then a shock is a different or special kind of experience?

Ray - For me, yes.

Richard - I experience everything all the time. I can experience in all day. Nothing to shock me yet on this [inaudible] but I had lots of shocks.

²⁸ Ray is referring to his juggler isophor as a way to understand systems practice. The interested reader is referred to Ray's book *Systems practice: how to act in situations of uncertainty and complexity in a climate-change world*. 2. ed. London: Springer, 2017.

²⁹ Ray is referring to the Postgraduate Course in Systems Thinking in Practice of The Open University, Milton Keynes, UK. More information about the Course can be obtained at: THE OPEN UNIVERSITY. *Systems thinking in practice*. Available at: <http://www.open.ac.uk/courses/choose/systemstinking>. Accessed 3 March 2020.

Fantini - In what sense the meaning of experience is different from that of shock?

Ray - I came back with the underlying emotion. The characteristic of that shock [Richard's shock] was the emotion of fear. I mean, if there was no choice Richard was trapped in the emotional fear; caught, trapped, whatever. And by providing one of the options which Richard chose, he chose a part right deepening his relationship with that people, which I would argue in Maturana's sense, is emotion of love. They gave him the opportunity to treat them as a legitimate other in a new form of legitimacy. I should say I'm not refusing Richard's explanation. I'm offering nearly another explanation which is grounded in my history which is different to his history. Richard is making a point and what I am offering is a hermeneutic, a circle.

Richard - The difference between explanation and interpretation, which is also dialectic. In fact, when we think about it, one of the important issues of systemic is dialectic.

Sandro – Just a brief comment. For two or three times students of my courses in systems asked me exactly about this, about the relationship between systems theory and dialectic.

Sergio Martins - I would like to add something still regarding this idea of an experience of shock. For a young professional who is going to work in an organization, the shock might come step by step, because he/she sometimes is not aware of this. Only slowly he/she perceives that something is disturbing him/her; the shock is not immediate. Until at a certain moment when these accumulated perceptions are transformed into a shock and in the necessity of making a decision.

Richard - And even if I think about again in my life and I wonder if everyone else does - *no soy experto* [I'm

not an expert] - that the issues of art, in music, in my life time was Pablo Picasso to suddenly go from photography essentially taking the landscape to cubism. It is a way to see the world. That's shock. In fact an Australian wrote a book called "The shock of the new"³⁰. And for me the rock-and-roll was a shock compared to jazz which I hadn't planned. Rock-and-roll was suddenly something totally different and I responded.

D'Agostini - But there are shocks that don't change us.

Richard - Not without re-conceptualizing. So, Picasso does cubism. Oh, what does that mean? I had to see the world from his eyes, what is he saying. Rock-and-roll was lyric, and jazz there are some lyrics but not much. And rock-and-roll, this is transition, back to story telling, in a funny way, in a shocking way, noisy way.

Antônio Pedro - Richard, I think that we are aware that a shock is very, very important to every change, for the university as well as for our life. Accepting that a shock is so important, how can we use a shock as an instrument, or as a skill to change the context we are embedded in?

Richard - Sergio [Pinheiro] said in other way. Throw away the remote.

Antônio Pedro - I would like to be a shock in my institution. If we don't have a shock I would like to create one.

Richard - Bravíssimo! Absolutely!

D'Agostini – [to Antônio Pedro] What do you mean by that?

30 Hughes, R. *The shock of the new: the hundred-year history of modern art – its rise, its dazzling achievement, its fall.* Knopf, 1991.

Antônio Pedro - I'm not talking about my personal shock. Perhaps I can transfer my personal shock into an institutional shock.

Richard – Sure.

Ray - I can give an answer which is from my personal experience of being at the Monash University for the last almost 3 years. How I came to Monash is important because I was at the point as a full chair through the front door, I came in the side door. By several years conserving relationships, a new vice-chancellor came, and he installed a vision for Monash of 5 or 6 grant social progress, which sustainability was the key one. I sent him some material which said I have experience which could make those things happen. And that profile was to position systems and sustainability at the crux of the University. And the opportunity I saw was that you could build it throughout the University as a generic competence. Every student had to do something about sustainability, and every curriculum has to do something about it. To walk the talk we say in English. They had to join up research, teaching and the management of Monash's estate. This all have to be a key element of governance of the senior team. When many corporations introduce sustainability, they often put a lower manager, someone lower down and they don't build it into the actual governance of the whole entity. So I wrote to the vice-chancellor, that I never met, and he replied me in half an hour, and he said, we will have a meeting, we had the meeting, and he emailed me after the meeting and said "I was very [inaudible] for that conversation. I like you to talk to the deputy vice-chancellor of research". I met the deputy vice-chancellor of research. She didn't wanna know anything about what I had to say because she was pursuing a mission of trying to spot

internationally high achievers who would increase the research performance of Monash. That was her only issue.

Richard – Your [Antonio Pedro's] question now could be “how could he produce a shock to change the deputy vice-chancellor?”

Antônio Pedro – Of course! It was a decision of shock creation.

D'Agostini - Frequently Sandro complains that everybody says that they are adopting a systems approach [but they are not]. We always receive Richard's and Ray's experiences as “ahh, I understood”, but they don't need to change. How will we get people who are capable or are in a condition to change effectively?

Antônio Pedro - And to produce consequences...

D'Agostini – Your story³¹ is good, Richard.

Richard – But as a practice.

D'Agostini - In case I ask somebody, do you prefer a systemic approach or a non-systemic approach, certainly he/she will reply “systemic! I have a systemic view”.

Richard - Systemic always!

D'Agostini - This means that these persons, myself included, do not have a clear idea, and are not aware, of what is necessary to go through this change. Everybody thinks that they have a systems approach. The word is pleasant. Yesterday I learnt that at least I need to have a special experience, a shock. Afterwards a dialectic process is necessary to theorize, and to perceive its implications. At least this is necessary. And also

31 D'Agostini is referring again to Richard's account of his working experience in Uruguay described in Chapter 2.

resources are necessary to achieve this. The question is: how to make this simple in order to be practiced.

Richard - I go back to the issue of trying to change institutions, to the Freirean notion that says you change yourself. Socrates: “First know thyself” and then make decisions about, in [inaudible] terms, living a better life. For some it would be within the institutions trying to change them; for others it would be throwing away the keys of their motorcar and walking; for others it would be writing books, and for others ignoring it or whatever. The choice is Freirean, it is transformation of me and then I make choices about what I do rather than saying “My God! Nothing will happen until the university changes”!

Ray - I want to go further to Richard though.

Richard – *Siempre* [always]!

Ray - I think if we have a genuine systemic appreciation then one rule of responsibility is to unpack the systemic consequences of what people do when they do what they do. My view is that most people don't know what they do when they do what they do. The only way I would have succeeded in Monash is to [inaudible] a very prestigious fellowship from our research council because in the terms of the deputy vice-chancellor this was the epitome of success. I applied but I didn't get it. Since Christmas I've... to pursue the strategy I'm working about, you need financial independence. So you need tenure in the university or you need independence, money or someone who gives you money. Otherwise it is almost impossible. My own view is that most academics in Australia had forgotten what the rationale for tenure is, or it is constrained. My view is that tenure provides a platform to engage critically with the society.

Richard – The important thing is not to get depressed by this. There are some institutions that are open to change. All institutions are open to change at some time, and so from our point of view, of a group of concerned people, it is to choose the best way. And for me, based on an experience I recently had in Costa Rica, the issue that emerged was “the movement”. It wasn’t an association, it wasn’t an organization. It’s a movement. It’s a discourse and that’s working.

D’Agostini - I like very much Ray’s expression that it is necessary to be aware of what we do when we do what we do. But precisely those who are not aware are those who think they are aware of what they are doing. And yesterday when Richard told us about his experience [in Uruguay], I felt that in some way, many of us, if not all, have situated themselves: ahh, I also had an experience. Therefore, I’m asking myself: how to make this more accessible to everybody? The way he [referring to Richard] tells the story makes easier to become aware of that.

Ray - There is a paradox here, because Richard told us a story in a context of relationships created, but the underlying emotion was conducive to us hearing his story.

Fantini - This, D’Agostini, responds partially your question. It is difficult for most people to understand, because the context almost always is not suitable to allow people to understand.

Richard - So that is the point of a movement. A movement is a relationship between people. And it is dynamic.

Ray - If I go back to your question [referring to D’Agostini], the choices I perceived to have if I wonder to change Monash which I don’t, now, the only possibility I can

see in my appreciation of the institution, is that people in the Medical Faculty are increasingly interested in systems ideas because of the complex, wicked issues that they approached and Medicine can't deal with. And Medicine is the prestigious part of the University, and the vice-chancellor is a medical doctor.

Fantini – So you have to engage with them.

Ray - If I wanted to change. I won't. That's possibility.

Fantini - To create emotional conditions to, or simply relationships, or...

Ray - In a way more pure politics.

Richard - Here is a suggestion that I think may change the conversation. If we accept that roughly those four issues are important: existential experience of shock, conceptualization, resources and consequences. If we accept that, if we also accept that the energy that we have is insufficient to take on organization, why we do not think of ways over the next few days of creating everybody's story in a way that we can tell in other places, that we feedback to each other emotional dynamics. We are not saying this is a systems group, this is a dialectic group, this is a Freirean group. We are saying here is a movement of people who have those four commitments, if you will, and we are not alone. There are people all over the world in small groups having these sorts of discussion. And my conclusion after 40 years in Academia is that forget Academia. It ain't gonna do it. But we can.

Sergio Martins - I want to make a comment. My experience has shown that whenever I had constraints within the university and I looked for other partners for some projects with common objectives, it worked. My experience also shows that there are many groups all over Brazil doing new things, looking for other

paths. I think that what is missing for us is to look for these connections which are there, outside the group. Perhaps we are talking too much only among us, within the group.

Sandro – I think this goes in the direction of your [Richard's] suggestion.

Richard - The Costa Rica experience was people from all over Latin America, including *brasileiros* [Brazilians], and they were 60, and we were discussing the impact of human diseases of animal origin. And when they – I was just a facilitator – set up the idea of a movement each person went away to say we need to find in our own country now a network. We should know if there is a net. So every person creates another little net. The difficulty then is for resources. And what we were exploring in the Costa Rica experience was money from Google, because Google has lots of money. So you create a unique organization which needs to recognize that it is unformed but it is not a little section.

Sandro – I want to say three brief things. You said, Richard, “forget Academia”, no? We are now [during the conversations] outside Academia. This was for me since the beginning [when the idea of having this kind of conversations arose] a very important point, because it would be impossible to have this sort of conversations within the university. The second one, and perhaps I'm not right, but for me we are framing a sort of an epistemology of shock.

Richard - Ontology, not epistemology.

Sandro - Well, I don't know. Perhaps we can discuss this a little bit more.

Richard - Yes, an onto-epistemology [of shock]!

Sandro – Yes, ok. And the third one, I think there is also an underlying ethics on what we are talking because, for instance, we are talking about this emotional dynamics that you mention, Ray. For some people it can be an obligation to engage in this sort of conversation, no? So, for me there is also an underlying ethics in all of this.

Richard - Absolutely!

Sergio Martins - And you are going to dialogue with people with this same ethical perspective.

Sandro - Yes, exactly. There is an ethics when I want to do this. It might be an ethics of inclusion, but it might be also an ethics of exclusion, or any other.

Sergio Pinheiro - We [referring to the Brazilians in the group and addressing Richard] are talking about how to carry on the discussions and I remember the suggestion you made. We are reflecting on how we could do it. And as far as I can remember, you suggested that everybody should tell their own story, should share the experience and to get engaged with people like us who are participating of other groups or networks.

Antônio Pedro – That each one tries to identify an experience of shock.

Sandro - The idea is to have a method so that the experience of shock might be available to other people helping them to have this experience.

D'Agostini - This relates to what I would like to have, that is, a method to speed up or to trigger a shock. And this should not be a process restricted to a bunch of people only.

Richard - As far as translation is concerned, I think we should just tell the stories, because trying to interpret them

and translate them³² loses the issue, and this is not important for Ray and I, it is important for you, and we are talking here almost endless existential issues in accordance of experiences of shock, and I suggested that tomorrow when we go to the bush³³, we spend 10 minutes without words. Just let the gorge speak to us and tell its story to us, as a way of experiencing an existential challenge. *Sin palabras* [without words].

D'Agostini – Let me clarify Richard, what you are proposing for tomorrow. We all will go to the canyon to have the experience of seeing the place and doing what you are suggesting, of being there for 15 minutes without talking. After that we will come back, and all of us have the commitment to tell what was each one's experience.

Richard - That is what I understood.

D'Agostini - So Richard, you are proposing a method, a process of how to have an existential shock, what I think would be excellent in case we can have it.

Richard - I did it in Mozambique two weeks ago. We had two visits. On the first day, I let them have the conversations they wanted to have and they were all expressions of knowledge: "I know about the basalt", "I know about the town", "I know about the history of here [inaudible]". And the conversation with the farmers was about what was the yield, why was he growing soya beans, chemicals did he use, where are the markets. On the end of the first day, I said you knew those questions, and *mas o menos* [more or less] you knew the answers. So what if on the second day we go out and we don't ask any questions?

32 The speeches of those Brazilians not fluent in English were translated during the conversations.

33 Richard is referring to the trip to be made to the canyons in the next day (for more details about the trip made at Day Three see Appendix 3).

Instead of just looking at the farmer, we look at the children, we look at the plants, and then let them talk to us. And the response was incredible. People got nervous, but then they did as was suggested and they came back and told a story and we created a conversation of all the stories. And it was a totally different perspective. That's existential shock.

D'Agostini – Did you go to visit a farmer, or a farm?

Richard - Some farms.

D'Agostini - Did the farmers have a purpose?

Richard - This is interesting. The purpose that was assumed by the people in the project was that they were doing things for the project. They referred to them as our farmers. But that wasn't the farmer's purpose. The farmer's purpose was to get free seeds from this project.

D'Agostini – We need a purpose for our visit of tomorrow. Would we be engineers building a road, would we be tourists? In order to know how will we receive the shock.

Richard - A person in nature.

D'Agostini - Without a defined purpose. This is good because we are beginning to develop a procedure, a simpler process [to have an existential shock], that can be adopted in any circumstance, that we can learn to do this in a very simple way, and not only after having achieved a certain intellectual condition.

Antônio Pedro - Richard, Ray, perhaps it is difficult to feel a shock because I feel myself being many things at the same time. I am a human being, I am a professor, and so on, what perhaps makes me minimize the shock.

Ray - Let me come of this in other way. A former colleague of mine started working with senior bureaucrats in the government in London doing a systems training course. And the people who did the course found these simple systems ideas very profound and they had to then report back to their bosses. The bosses came in at the end of the course and they had to report back. And the bosses thought that what they have done is very critical and this course is useless. And my colleague asked me what I thought he could do. And the only thing I could offer was to point out that they had fallen into a trap. And that rather than reporting back to their people, what they needed to do was to use their experience to design an experience for their bosses. Something that is profoundly experiential, existential, you can't work about it in a rational... So that the question always becomes "How can we create the circumstances for the design of those experiences?" We refer this as the design of learning systems.

Richard - Which was your question [referring to D'Agostini].

Antônio Pedro - And because Ortega y Gasset³⁴ said that you are what you are and the circumstances.

Ray - Of course!

Richard - A simple example is that we have a vehicle very respected by the human that you [referring to the Brazilians in the group] had. You are always laughing and joking. It is impossible for you to separate the joke to us.

Ray - And the other important thing to say is that in the design of the learning system you can't design deterministically.

34 José Ortega Y Gasset, Spanish philosopher.

You can't guarantee that your design will deliver your design intentions because what they are really creating is a context for a relationship. Like a joke.

Antônio Pedro - Ray, I don't think it would be tragic not to have achieved a goal in life. To me the tragedy is not to have a goal.

Richard - There is an interesting philosophical argument. There are many philosophers who argue like [inaudible].

Antônio Pedro - This is not only about philosophy, Richard, because my concern is that I may try to do what we are discussing now, and I will possibly fail. But important for me is that I have tried, because I had a goal.

Richard - That is your ideology, that's your purpose. Your purpose is to have a purpose.

Ray - My own view is that it is important to have a conversation about purpose. I think that it is a really important conversation to have, which is different from saying 'we have a purpose', but if you go upon the question 'what is what we do when we do what we do', I would claim that most of this 'do what we do' is in the moment and then the attribute of purpose will go afterwards.

Sandro - Yes, sure.

D'Agostini - Can we make the visit tomorrow without a purpose?

Antônio Pedro - No, the purpose is to visit.

Richard - That's an aim, that's not a purpose. To live with a purpose suggests that the universe has some aim, some reason.

Sandro - I think there is a conceptual problem here between aim, purpose, and...

Richard - No, deeper than that, may be. It's a view representing a metaphysical issue that life has a purpose.

Sandro - This is what I'm trying to say. We are not distinguishing the differences here, the different levels.

Richard - Is not demanding.

Sandro – No. I'm saying that we are not making the necessary distinctions.

Ray - My problem with the notion of objectives is that it assumes [inaudible].

Richard - Tomorrow in the canyon it is metaphysical. It is *so alto* [so high]. Tomorrow when we enter the canyon with no words...

D'Agostini – Why are we going there tomorrow?

Antônio Pedro – What's your goal tomorrow? [referring to Richard]

Richard - My own personal goal that I would like to achieve tomorrow: *silêncio* [silence]. I want nature to speak to me. That is not a purpose, that is just me going and listening to nature. It makes no difference to nature, it probably makes no difference to me.

Sergio Martins – It is different from a purpose of life.

Antônio Pedro –It's a life goal [referring to Richard].

Richard – No. I don't have a life goal. It's to live.

Antônio Pedro – Tomorrow is part of my life: the silence, the nature, the people perhaps, the animals....

Ray - I would claim what you claim to be your objective, or goal, or purpose, as a reason all of you extended an invitation, to which you now attribute purpose, but you need to sort it out in anyway what you wanted to do tomorrow. And the difficulty of focusing on goals or objectives is let me do without a context, and we continue to carry goals and objectives into a context, I mean imposing on a context rather than to be opened to a context. So tomorrow we hear a [inaudible] big noise. If you hang on the notion of we need to have a problem, you have to adjust your [inaudible].

Antônio Pedro - We are talking here about the consequences of the shock, and we said that a shock must have consequences for us. If we accept this, aren't we establishing a goal?

Richard - The question was what process could we introduce. The response that I gave was to simulate an existential shock. The only reason I am using the word 'shock' is because that's in the literature. So it is an existential challenge in my work. Tomorrow we go to the canyon not as a professor or as a tourist, we go as a human being. We are at nature without purpose is my [inaudible] position. Nature doesn't have a purpose from my position under this theory.

Sergio Martins - I would like to raise an issue. Perhaps I'm understanding what is being proposed but only as a simulation, because this perception before nature, silence, when it is a natural process, is one thing. I, for instance, have this experience almost daily when I see the sundown where I live. It's a spontaneous process. So the perception is a true perception.

Richard - With perspective [inaudible] about the context, [inaudible] for me walking into a canyon in Brazil without words will be existentially challenging. For you, [inaudible].

Sergio Martins - But on the other hand tomorrow, when the group goes to the canyon already with this purpose, this perception becomes to some extent artificial. We already left prepared for this, and therefore this is only a simulation.

Richard - Yes, that is true. On the other hand it would be leaving it to chance that we have no existential challenge.

D'Agostini - Sergio [Martins] and Antônio Pedro, I understand that some philosophical difficulties may exist, but to me the fact that a procedure [for the shock] exists is more relevant.

Richard - Yes, it is. Pragmatically.

Sergio Martins - All right, I understood. We are discussing it as a method.

Sergio Pinheiro - You [referring to Richard and Ray] have invited us to tell some stories of existential shocks. Am I right?

Richard - Yes, we had. You are right.

Antônio Pedro -Richard, what I'm taking from our discussion today, is that I should not miss the opportunity that a shock offers. A shock must be an opportunity, and therefore I need to pay attention to my shocks.

D'Agostini – Last night I was thinking that I had had a shock and had not noticed; I did not understand. I was not right in the light of what Richard was talking about. In fact, as relevant in the process for me was to have understood yesterday a bit better what happened to me listening to them

[to Richard and Ray]. I began to situate myself better regarding what happened to me as well as in relation to what I do today.

Fantini – I can tell you a story. Since yesterday I was thinking: have I had such an experience which can be considered a shock? I could not remember, but today I remembered an experience that I think it was so strong that perhaps I have consciously forgotten. I went to high school in an agricultural boarding school, a technical agricultural course. I started the course at the age of fourteen until I was sixteen, and before having completed seventeen I got a job in a sugar cane genetic breeding programme. At that time my boss said to me “Fantini, we’re going to harvest a big sugar cane experiment in Joinville³⁵, at a sugar cane mill”. The experiment was almost a hectare, and it had around 200 [experimental] plots. They were experiments of different sugar cane varieties. It was my first experience of this kind. We did arrive there and talk, and the mill provided 25 people to help with the work. When I did look to those 25 people I thought “how are we going to tell them that each plot has to be harvested separately, weighed and identified?” Then those people arrived, and my boss explained what would be done and said to them “Fantini will take care of it” and left. I thought what do I do now? I had no idea on how to organize those people, how to engage all of them in the work, and how long it would take to finish the work. I even had no idea that my boss had arranged for me to stay at the house of one of the foremen. Later the foreman told me “you’re going to stay at my home today”. And the whole work lasted five days. And when I was going to leave I discovered that I could not get on the bus because I was not 18 years old. The whole experience was very traumatic, but the worst moment was when my boss said “Fantini it is up to

35 Joinville is a municipality located in the north of Santa Catarina State, Brazil.

you; take care of all of this because I'm leaving". After all this time my assessment is that he was testing me. Either I would handle the task, or I would be fired in the next day: "look, you do not have the profile to work with us". But in fact, in case I had my own vehicle I had probably left on the same day, such was my despair.

Ray - But at the end you managed. How did you feel about the fact that you had managed?

Fantini - I didn't feel comfortable, because this was the other experience that I didn't like. I didn't know that my boss had arranged for me to stay at the house of one of the foremen. During the whole week I felt like a field worker. Therefore, the whole experience was terrible. The only thing I thought was that if I could get out of that situation, I would leave.

Richard - That's existential.

Sergio Pinheiro - I'm not sure about the context, but maybe your boss [referring to Fantini] understood that it was time for providing you a learning context.

Ray - That is a question of purpose. You are attributing purpose to his action what we call purposive behaviour because you are attributing purpose. But until you have not had a conversation with that person you wouldn't be able to guarantee that was the purpose.

Fantini - I guess we didn't have that kind of conversation [lots of people laughing].

Sergio Pinheiro – Fantini, today would you put your students in such a situation?

Fantini – No, I wouldn't. But I also don't make things easy for them.

Antônio Pedro - Fantini, what was the meaning of this shock for your life?

Ray - Good question.

Fantini - I think from that experience I knew that I can do anything, because the next task I had was to implant a big experiment like that one, in Rio Grande do Sul State.

Ray - You could say that the person's actions were very ethical, because what he gave or offered was an extension of your behaviour possibilities.

Fantini - My interpretation is that there was not a bad intention on the part of my boss.

Richard - Anyway, what I've heard from your description, you could say I need to check my interpretation with his explanation.

Sergio Pinheiro – Much like what happened with D'Agostini here, and that became evident for me particularly yesterday, is that I haven't thought so far if one of the stories I have experienced fit into this distinction of a shock. And that was a learning experience for me. When I came back from my M.Sc. in New Zealand, where I learnt about systems, about Checkland, but especially about hard systems, I thought I knew a lot, and that I now had the knowledge to help farmers and producers. At that time I was working in Lages³⁶ at EMPASC³⁷ [currently EPAGRI³⁸] and we got a multidisciplinary team to work within the systems approach, similar to what could be

36 Lages is a municipality located on the mountain plateau of Santa Catarina State, Brazil

37 EMPASC = Empresa Catarinense de Pesquisa Agropecuária [Agricultural Research Enterprise of Santa Catarina].

38 For a description of the acronym EPAGRI see footnote 19.

found at IAPAR³⁹ with farming systems. We were five or six experts on a team and I was in charge of “the management” part. So, around 1986, 1987, we were doing farming systems research and extension in a traditional way. After three years of several multidisciplinary studies, we approached a farmer with the idea that he should adopt rotational grazing. I had the financial arguments and my colleagues the technical arguments to convince the farmer. He then said “ah, nice, you are right. Indeed this will improve my pastures, I will have more cows, increase my milk production, and by the end of the year I will slaughter more calf. But I want to show you something”. And then he took us to the stable which we had seen several times. But we had never paid attention on a corner of the stable, where there was a music system, with a sound box, a guitar stand and a microphone. He then said “look, are you guys seeing this? This is what I like to do; that’s what gives me pleasure; I like to have my cows, to make silage, but what I really like is to play with my friends over the weekend. My wife likes to make bread and to cook food with her mates for the party, and you wanted me to keep carrying cows from one place to another, just to have a few pennies more?” With that he overturned our argument, and I realized that I had never asked him what he liked most, and that in the last three years he was satisfying our objectives. And after that, to complete the story, this same farmer visited EMPASC, the experimental station. This, a farmer looking for an experimental station, was very difficult to happen, particularly a small farmer; farmers did not visit the research station quite often. They came to attend a field day, when free seeds were handed out, or something like that. And this farmer came to look for me because I was working

39 IAPAR = Instituto Agronômico do Paraná [Agricultural Research Institute of Paraná].

with rural administration, which is much more difficult to happen. And he said to me “I want my cash flow”, because he had seen my talk about that. And I asked “what do you mean, your cash flow?” I had come back from New Zealand with all known books on the subject, and he wanted a cash flow with its own features, grouping together certain types of expenses and incomes in a form to make sense to him. Admittedly, I had never asked him how he would like to have his cash flow. I was just reproducing the models of specialized books, which I only realized that day they were not suitable for the context and needs of that family. So, this farmer gave us one more lesson.

Sergio Martins - First, the context. I graduated in Agronomy very young, at the age of 21 and naive. And the story I'm going to tell you has to do with naivety, since for me a professional is a human being absolutely committed to truth, to goodness, and justice. For me, a medical doctor, a lawyer, an engineer, were people who did not fail, who were committed to the human being. It did not occur to me that there could be evil on their part. Once I graduated, I had several job options, and I chose perhaps the worst, which was to work in a multinational chemical company. The first shock: the director of the company that interviewed me told me that I was going to work in a company that was manufacturing from chemical products to products for the spaceship. We were living the space race at that time. And that was a shock to me, because I felt powerful; I even felt like an astronaut! The second condition of the director: that I would be obliged from that day on to stay in good hotels; third condition: to eat only in good restaurants – imagine, I was a very poor student – and to be well dressed; and the fourth condition: I got a Volkswagen and a good salary. Did you perceive the context?

But it is important to mention, the Faculty of Agronomy⁴⁰, despite all its shortcomings, gave me the idea that the farmer was my objective, that my education was to do the good for the farmer, to improve their life. This is an important thing that has marked me a lot. And what was the shock? Then, after been working for one or two months, I discovered that I was being forced to deceive the farmer, because I was forced to sell more products than necessary. Then, I went into shock when I discovered that. It was my conviction that I had to help the farmer, but I realized that I was misleading them. And at the moment I became aware that I was misleading the farmer, I got into shock and I became a bad employee because I could not sell any product anymore.

Sergio Pinheiro - Did you stay in the company for how long?

Sergio Martins - Six months, because obviously I was subtly invited to leave after that. And this experience was a big shock to me and it made me think about reality. And all my other professional shocks were more or less along these lines, and they made me look for other paths, because I realized that they only offered me things to deceive the farmer, whose life I wanted to improve.

Antônio Pedro - I will tell you three short stories, and one of them is very personal and I think it was a big shock, because until today I can remember it. I was five years old and was alone at home with my younger brother, who at that time was two years old. It was a summer afternoon, and in those times hailstorms were common. And in that afternoon we had a historic hailstorm. And I, a five-year-old boy, was alone at home

40 Faculdade de Agronomia Eliseu Maciel [Eliseu Maciel Agronomy College], of the Federal University of Pelotas, in Rio Grande do Sul State.

with my little two-year-old brother. The hailstones began to fall and they destroyed the roof of our house and this terrified me. I remember leaving my brother alone at home and going out into the rain to see if I could find some help, until a neighbour took me in his house, and I waited until the storm finished to go back home. Now two professional stories. I was giving a talk when I was in the Rural Extension Service in Urussanga⁴¹, and I thought the subject was extremely important, since I was talking about the collection of Funrural⁴². A farmer who did not issue a sales note for his products could not collect this tax. I explained to the farmers what Funrural was all about, the advantage of collecting it, and what was the medical care. About 40 farmers were attending the talk, and one of them, sitting on the front row, was paying close attention. When I finished the talk and I asked for questions, he was the first to ask: “in case I do not get sick, what do I do with the Funrural I collected”? I replied to him “in case you think that to collect the Funrural is useless, don’t do it”. And the third story, which shocked me a lot, is about a project of mine funded by CNPq⁴³ of native [swine] breeds of Cenargem⁴⁴, to which a lot of money had been allocated at the time. The headquarters of the project was in the Colégio Agrícola de Camboriú⁴⁵. We

41 Urussanga is a municipality located in the south of Santa Catarina State, Brazil.

42 FUNRURAL: Fundo de Assistência ao Trabalhador Rural [Rural Workers Assistance Fund]. The Funrural is a social security contribution tax, levied on gross revenue from the sale of rural production.

43 CNPq = Conselho Nacional de Desenvolvimento Científico e Tecnológico [Brazilian National Council for Scientific and Technological Development] is the main Brazilian funding agency of Science. The CNPq is linked to the Ministry of Science, Technology, Innovations and Communications of the Brazilian Federal Government.

44 Cenargem = Centro Nacional de Recursos Genéticos [National Center of Genetic Resources] is part of EMBRAPA [Brazilian Agricultural Research Corporation] and has currently the denomination Embrapa Recursos Genéticos e Biotecnologia [Embrapa Genetic Resources & Biotechnology].

45 Colégio Agrícola de Camboriú [Agricultural College of Camboriú] was at that time a secondary boarding school located in the municipality of Camboriú, in Santa Catarina State, and is currently denominated Instituto Federal Catarinense – Campus Camboriú

built the pavilions, the stalls, and bought the breeding stock, a herd of approximately 60 matrices. The project was going to its third year, engaging more and more people when, all of a sudden, we got the news that CNPq had no interest in the project anymore, and that the funding has been cut. The animals were slaughtered and the project finished.

Ray - A good reason not to have goals...

Sergio Martins – What's the message, the lesson that's left from this last story?

Antônio Pedro - The disappointment with all those government structures.

Fantini - But I think it could have been worse. I have a project with charcoal producers, and I am afraid that this will happen, that the resources will end, because I have created a big expectation.

Antônio Pedro - Fantini, I was involved in the entire state of Santa Catarina, Paraná and part of Rio Grande do Sul⁴⁶. There was an expectation of what could happen because it was the first national programme of swine germplasm. To date there is no such programme in Cenargem. Only of cattle, of horses and goats, but not of swine. I had never seen before how irresponsible is the use of public resources. Thank God the whole structure of the project didn't get lost because Colégio Agrícola kept that structure, and used it with other animals.

Richard - All these stories have a strong ethical commitment. The issue is that in Western education none of

[Catarinense Federal Institute – Campus Camboriu], nowadays also offering higher education courses.

46 Paraná, Santa Catarina and Rio Grande do Sul, the southern Brazilian States.

us learn how to make an ethical judgement through school or university. We learnt how to make scientific answers. Each one of these issues are ethical issues and yet we began to have [inaudible], so to ignore them or [inaudible] continuously. I worked for a pharmaceutical company in the same way. We were working on a malaria project and because nobody buys malaria drugs the project stopped and we worked on anti-rheumatoid for aging people who could afford.

Sandro - Actually, I don't think I have anything to tell you. When I was thinking about our conversations here, I wrote to you that to me this would be also an opportunity to express our doubts. I don't know whether I had the experience of having a shock. I really don't know, and perhaps my shock is to imagine that I never thought there might have been a shock that would lead me to think about what I do. I never thought that any event or anything else made me think differently or to do something that could make a difference in my professional life, in my personal life; that I began to make things differently because something happened. Now I'm convinced it didn't.

Sergio Pinheiro - But do you at this moment recognize that there might have been an event that you did not perceive at that time as a shock?

Sandro – If these events happened, I can't see how they affected me, in making me do what I do today. Even if I think of some experience that might be a shock, I can't make the connection among these four elements Richard suggested. I can't connect shock to conceptualization, to resources and to consequence; I can't connect this. Perhaps because I did not have any professional experience outside of university and therefore I was not confronted with certain circumstances like the ones you were confronted with. Or perhaps the shock

occurred gradually and I did not realize it. So, I don't have any story that I could say has affected me. Perhaps my shock was to know that I never had nothing similar to this. And this shocked me.

Antônio Pedro - There is an aspect on what Sandro said that caught my attention. That perhaps we all here are not talking about shocks, but of indelible things, and that with the reflections we are making we are cataloguing them now as having been shocks.

D'Agostini - Would it be appropriate for me to remind Sandro of a fact, a shock, an experience he had? Sandro met Ray at a conference, through Sergio [Pinheiro]. At that meeting, Sandro talked to Ray about the possibility of going to England. Sandro was going through an important moment in his life. His father was ill, and he was unsure whether to go or not. I even sent Ray an email saying that Sandro had some reasons to have doubts about whether he should go or not. Ray answered me saying that maybe Sandro was misjudging what was going on. I spoke to Sandro again, but I felt really bad about having to say what Ray's email was suggesting: go to England! Days later, I received an e-mail from a friend of mine with a short film in which a woman was giving birth and the baby quickly became an adult, only to later appear dead in a coffin. The whole life cycle – from birth to death – passed very quickly. I showed the film to Sandro who after a few days came to my house and told me that the small film had convinced him [to go to the UK]. So, there was a fact, Sandro reflected on it, theorized what could happen, and the consequences are such that we are here [taking part in the conversations].

Richard - I have to say, it always surprises me, but you couldn't say that I can't think in some events. Reminds my life

had been tense for one year and another and exactly because I recognized them as event, it is because of the circumstances of bombs and war I think, because life you have not had a previous life, but I was four weeks old when the Second World War started. At the age of two, I could remember bomb planes coming across and bombing people from the other side. By the age of six, I was convinced that the warfare was stupid, etc, etc, etc. Every day, every year... major events.

Sandro - I'm not saying I can't remember events. Definitely, I accept this [of remembering events]. So, for instance, I can identify a very clear line dividing my academic career in two phases, before and after my time in Milton Keynes⁴⁷. In that sense, I can recognize that it has changed my life.

Richard - The sense that I'm trying to capture, which if the literature is giving me an explanation for what I have pursued over 40 years as an educator, helping people to transform themselves, literally assuming a different form of epistemology. They have a different view of reality that becomes much more capable of dealing with complexity. That it is the four things that I mentioned before. So it is not just the shock, it is not "*poco a poco*" [step by step], it is some situation that we find ourselves in, that says I can't deal with that situation in the present way I think.

D'Agostini - Antonio Pedro said that we are what we are, and the circumstances. My impression is that Sandro was searching in his memory for something that can't exist. He wanted to have a story similar to ours, and we had stories of a professional life he hadn't experienced, and he searched

47 From June 2003 to June 2004 Sandro was a Visiting Research Fellow of the former Systems Department (currently Faculty of Science, Technology, Engineering & Mathematics - School of Engineering & Innovation) of the Open University, in Milton Keynes (UK).

for similar stories, similar to our own. But the context or the circumstances are different.

Ray - I would offer the observation that Richard is a contumacious story teller. He has the power and the practice of creating stories. Not all of us have this skill in creating stories. It's a mode of reflection which we do not always go in.

Richard - But I keep going back to D'Agostini's process. The major lesson I learnt from my Hawkesbury experience⁴⁸ was there is no single way to help us, to help people transform. Except, in my experience, there is this fundamental notion that says we will never transform while we are surrounded by familiarity. [inaudible]. And so part of the process, and this is one of the questions I [inaudible] the university, is that also what D'Agostini said yesterday about individuals. But individuals are no longer recognised in terms of the transformation, they simply take an exam or we take their memory, bla, bla, bla... has nothing to do with their epistemology, their cosmology, their theology, without reviewing that. And so the challenge for educators in higher education is to take students [inaudible] higher [inaudible] and sometimes, for each one of us, that is triggered by some event or another, in my opinion, not by reading theory. Something has to happen to us, to take us to the reflective question "how can I deal with this task?" And it is a pragmatic question, to deal with this, not just understanding. This is one of the reasons why it's so difficult to do in institutions, because we collectivise. So, in my day, I was educated with a tutor. I had a single tutor, one-to-one, to [inaudible].

Ray - The other thing I would like to add in this is that methodologically the act of creating a story and telling it in the context of a listener can be in itself transforming. When you invite

48 Regarding the Hawkesbury experience see footnote 17.

a story you have a reflective space and the creation of a narrative which this person may never have constructed in their life.

Sandro - I think this is the issue we are trying to raise here.

Sergio Martins - The power of a good story teller, of a good teacher.

Antônio Pedro - We reported here some of our shocks because it has been requested, but we didn't know that they were shocks, since that had never been said to us before. Therefore, I propose we do an exercise. Let each one of us think about the shocks we had and which were their consequences, which things, perhaps a story, perhaps an experience, etc, were relevant and that changed us. Because Richard, we are recognising our shocks only now. Yesterday I had some shocks, today I have several shocks and perhaps tomorrow I will have even more. Because I think a shock is extremely subjective. And Ray, I have a doubt here about the degree of shocks.

Richard - Absolutely. Actually, this is exactly the point, the degree of shock. It is not necessarily the scale. So, there are types of shocks that make us, that trigger us to say and I keep going back to existential because of the question that says "can I continue to exist as I am?" This is the difference for me between the Spanish *alguién* [someone] and *quien* [who] and not what I do but what I am.

Antônio Pedro – That's what I think.

D'Agostini - The word shock to us may be strong...

Sandro - My fear is that we could take what we are reporting as a shock, but that it is not existential in the sense Richard is claiming.

Richard - But the point is made when you start to talk about, call it whatever you will, 'shock' is a useful word, but remember that it is existential. In other words it is something that stops us in our track, that says I was on this trajectory and now I can feel this in that way.

Ray - I'm going to give four vignettes. One is in my senior year in high school. I was elected school captain. The woman who was elected came from an academic family, I didn't. Whenever we had to give a public speech, she was usually chosen because she was better than me. In 1970, at the Anzac Day ceremony, it is a very significant holiday in Australia to celebrate the landing of soldiers at Gallipoli, in Turkey, in the First World War. It is a celebration of a defeat. My colleague made a speech at the Anzac Day ceremony. We had all the officials from return soldiers, etc. She gave a speech which attacked the Australian involvement in Vietnam, and you could see every one shocked and me too. And now I come back to last year. Last year we had a 40year-anniversary of my school. And after 40 years I was able to say thank you to Shelly, because what she did was open up a transformational space for me, because I was invited to speak, I had to take responsibility and I had to reflect on the nature of courage on what you do when you make a public critic. The second story: my first day in my job with the state government soil conservation service in New South Wales [Australia]. And I was one of perhaps five or six graduates, appointed on that studying work that day, and the person who is second in charge of the agency had to entertain us. He wasn't expecting us and he was trying to make small talk, simple questions, and he asked how we went in our graduates and I said "I graduated with honour so I did quite well" and his response was "Academic excellence won't do you match good in this organization". And the consequence of that

experience was automatically to leave but to never, as much as I could control it, be in an organization where I regarded as anti-intellectual. The third one took place on the streets of Herat in Afghanistan. I came at the outskirts of the city in front of a large mosque, in 1976, and I think I had what I regarded an existential moment. Here I was in Afghanistan in front of this icon of a culture which was so foreign for me and I had come from a rural community in Australia, and this was really an experience of my insignificance. If I would disappear then no one would know. And the fourth one is my daughter, age five, I said to her “Nicky you must wear a jumper. It’s cold outside”. She put her hands on the hips and said “Dad it’s my body and I know if it is cold or not”. So, it challenged my whole concept of parenting and had made me ever critical of anyone who step out to change someone else’s behaviour.

Antônio Pedro - Considering what Ray has just told us, I will tell you what it is to change behaviour due to a shock. My daughter was four years old and I was a smoker at the time. One day when I came home I found her with an unlit cigarette in her mouth. I looked to her and I didn’t know what to say because she saw me every day with a cigarette in my mouth. Then I simple said “daughter, we will make a deal, you’ll never again put a cigarette in your mouth, and I also never again will do this”. From that day on, I never smoked again.

Ray - At the end it was an ethical decision. And you probably added many years in your life.

IV

Day three: Wednesday, May 11, 2011

The third day of the “Conversations” started with the participants describing what they felt during the walk made that morning through a valley in the National Park, in which they remained silent, without talking to each other, aiming to facilitate the experience of having an existential shock, as has been suggested in Day Two. Reflecting on these experiences, the conversation continued discussing how we became hostage to rational thinking and how hard it is to stop thinking. It was also discussed how the modern worldview has taken us away from doing synthesis, from the ability to integrate different domains of human experience. During the conversation the participants also discussed the meaning of happiness and how it is related to thinking.

Antônio Pedro - I think the agenda of our meeting this afternoon should be the attempt of expressing what we felt this morning⁴⁹. I would like to apologize for my, how would I say, sentimental notes, but this is necessary because it is what I felt, truly and honestly this is what I felt. Can I read it?

I did not feel very comfortable when I came to the banks of “do Boi” river

I felt like an intruder.

I had a shock.

Everything was very, very strange for me.

Almost hostile.

Very hostile.

It was not my home.

I was just a tourist.

A visitor attracted by something unusual, different.

I was in other culture.

Sure, I have seen several beautiful mountains.

Graceful valleys.

Sumptuous rivers

And majestic landscapes.

Yes, I have seen.

I have often applied my senses,

All of them,

In search of perceptions.

That's how I saw them.

I touched them.

I smelt them.

I heard them.

49 Antonio Pedro is referring to the visit and tour made to the canyons at Day Three of the “Conversations”, remembering that Richard has made the suggestion to keep in silence during the visit. More information about the visit and tour made at that day can be found in Appendix 3.

But now I'm feeling,
Not only touching.
Living.
Not only admiring.
Living my senses.
From the gigantic mountains
I felt their reprehensible air.
I heard a very loud noise.
Their hostile look incriminating me
By the profanation of the environment I was practicing.
Just like that tourist stepping on the forbidden grass.
I felt even the arrogance of the mountains.
Better so.
They treated me with arrogance.
But they were not indifferent.
It even brought me a bit pride to have been perceived by those
great beings.
When I saw the mountain, I blushed.
I felt ashamed.
In fact, this is not my world anymore.
Nature is no longer my world.
I left.
I disconnected from it.
I built another world.
Fallaciously gorgeous.
Of technology,
Of competition,
Of profit
And of superficial senses.
Again I felt ashamed.
I was sitting on the banks of the river.
On a stone.

I didn't look at the mountains anymore.
I looked at the waters
That parade in front of me.
Those waters more committed with movement
They went down fast.
In torrents.
In a hurry of accomplishing their mission.
They were the nervous waters.
The operative Martas⁵⁰ of a trajectory.
But, right there, very close to me were the waters of the refugee.
Calm.
Standing.
Intimate friends of the rocks.
Tight together, water and rock.
And there they were feeling each other.
Caressing, without hurry.
While the waters from the middle of the river ran away from
the banks, running over the stones, those here were calm.
Static.
Making company to the rocks.
The waters of the stream did not have time to greet the stones.
The waters close to me were savouring the contact with the
stones.
Now I felt envy.
Of this community.
Of this nature.
Never before I have lived it as in this moment.
The rain fell.
The clouds came.

50 Marta and Maria, from the Gospel. Whereas Marta represents an operative dimension, Maria represents a contemplative one. Marta and Maria together symbolize the harmony between action and contemplation.

And on them I could reach the summit of the mountains.
To embrace those giants.
And ask them to adopt me.
To let me come back.
I would like to be the prodigal son of the Gospel.

Ray - Beautiful!

Fantini - Wonderful!

Antônio Pedro - It was difficult, it was painful.

Richard – It was lovely! Can I ask you to do something? Would you mind just reading two or three sentences without translation? Just read it in Portuguese. The sound of your voice in Portuguese is like the water when it approaches the rocks, for me⁵¹. [...]. When we talk some more, I will come back to why I ask you today. I want to hear some other persons, right?

Fantini - I can talk about my experience. The other day I was talking to you about my recent activity as a surfer. Today, I noticed that what I feel when I'm at the beach is disconnecting from the life I lead during the week. It is like I turn off a key and the activities of the week would lay behind me. Although I have started this activity very recently, I think this is the reason why I'm completely addicted to it. I feel this sensation maybe every week. I look forward to Saturday morning to go to the beach because to be in the water is simply marvellous. Sometimes, even taking no waves, I go home equally satisfied.

Richard – Thank you.

Sergio Martins - I have three issues. First, is to think about the importance of the mountains in the context. These

51 Upon Richard's request, Antonio Pedro read again in Portuguese and without parallel translation part of what he has written.

mountains play an important role in the culture of the people who were born and live here. People close to the mountains are the result of these mountains, of the interactions with them. Another role of the mountains is of a physical nature, since they are responsible for the rainfall regime that occurs. They collect the air masses coming from the ocean. Even the shape and the flow of water depend on them. The second issue is related to the fact that I'm the result of a different landscape. I'm the result of the lowland, of the flat lands, of the lagoons. I grew up at the banks of perhaps the largest Brazilian lagoon, which is Lagoa dos Patos⁵². And the rivers of my childhood were rivers where I could swim, with a rather soft riverbed. And a vegetation I didn't fear, but that I dominated. I could walk through the woods without fear of getting lost. And a bit of the "pampa gaúcha"⁵³, half similar to the Uruguayan landscape. I'm closer to the landscapes of Uruguay than that of this mountain landscape. I think I'm the result of this. And the third issue is perhaps a more metaphysical issue, and who helped me to understand the concept of divinity was Leonardo Boff⁵⁴, with the human beings – cosmos connection. And in this moment, from an individual point of view, in the face of the greatness of the landscape, the conviction of my connection with the Universe was reaffirmed in me, that I'm the result of my interaction with nature, even though I do not feel part of this mountain landscape, but of the landscape of the flat, lowland regions, near Lagoa dos Patos, where I was born and raised.

52 Lagoa dos Patos is a lagoon located along the southern coast of Rio Grande do Sul State, Brazil.

53 The Pampas are fertile South American lowlands that cover more than 750,000 km² and include the Argentine provinces of Buenos Aires, La Pampa, Santa Fe, Entre Ríos and Córdoba; all of Uruguay; and Brazil's southernmost state, Rio Grande do Sul. Adapted from: WIKIPEDIA. *Pampas*. <https://en.wikipedia.org/wiki/Pampas>. Accessed 5 March 2020.

54 Leonard Boff is a Brazilian theologian and one of the founders of the Theology of Liberation.

Sandro - Looking at the river, all that stones, the mountains, evoked in me the issue of memory, memory that is within that landscape, and that escapes my understanding. Looking to the river, and thinking of all the changes it has undergone, I'm taken by a feeling that we are also changing all the time. And that we often do not have control of these changes. They are happening. And this has led me to our discussion that life has no purpose, that the river has no purpose, how our deterministic effort to control life and its circumstances makes no sense.

Sergio Pinheiro - For me, two feelings that were already spoken here were mixed. One is about purpose. I had a feeling of insignificance. Looking at the rocks in the river, they express nothing to me, and time seems insignificant. We are here and suddenly we are not; the river is on one side and on the other. The second has to do with what Sergio Martins told us about the mountains and their significance in context. But I couldn't understand the meaning. For me they were just mountains, just a nice, quiet and peaceful landscape. For me it was just an important moment of not thinking, of not running, of admiring something. But I remembered once, when I came back from Australia for the first time in a year and a half after I left Brazil to pursue post-graduate studies. It was a rainy day, I was alone, and I went to Silveira Beach, in Garopaba⁵⁵. Nobody was there, neither surfing, the south wind was strong, and I sat on the coast stones where I used to sit and I stayed there for about three hours. In that occasion, a very strong connection happened. This morning on the mountain, observing a landscape I have never seen, I remembered a moment that happened about 12

⁵⁵ Garopaba is a municipality located in the southern coast of Santa Catarina State, Brazil.

years ago, a strong connection that I have experienced in a known place when returning to it after a few years.

D'Agostini - I think my experience was poorer. I could not at any moment stop being rational. At home, at night when taking the garbage outside, I commonly experience perhaps something similar to what you may have felt, when I see the Milky Way, but today I didn't feel it. I went there thinking of trying something, but I only found it beautiful. I confess that I made an effort to search for something to tell you later. I tried to think like this: if I'm Nature, and this all is Nature, what would be common and what is so different between me and that what I went to visit. So, I saw not only myself and the mountains, I and the river, but I also saw your behaviour and the presence of other beings, and I thought what is common and expressed in a very different way from that I could see: the relative importance of time and gravity, making us to be as we are. I, a very small amount of time, but not so heavily resulting from gravity, and those mountains, pure gravity, eternal.

Richard - Thank you. I use to walk. I deliberately go to places where I try to stop thinking. I spend a long time alone. In 1999 I returned from Australia to the farm where I have been a child. The farm is now [inaudible]. I went to a certain field and there is a stream. When I was a child, I used to escape from the work and hide. The original motivation was to hide from work but I began to notice that it was a different world, and that I could sit there and it was such a different world in one meter away from the farm. I mentioned yesterday that there was a war sending airplanes. Our farm went to the coast and there was barbwire. Our farm literally had a boundary. This was a world on the farm of technology and control and in the sky it was violence. And in a micro spot there was no technology

and control and there was no violence. What I learnt to do as a child was stop thinking, and the river, the stream, became the sound. I became a singer. And I studied things trying to catch up the sound. This is exactly why I wanted Antonio Pedro to read it in his mother tongue because that captured not the words but the sound in the canyon day on the river. That's all I heard. The mountains I ignored, the rocks, the geology, I was just listening to the river and the river wasn't a constant sound, it was changing and when I stopped listening I started thinking again. I tried to observe Leonardo. Leonardo is a guide in ecotourism. He was very uncomfortable with us doing what we were doing. He had earlier made a comment about getting rid of people from the park. And it seems to me such a paradox that what we were trying to do was to listen to nature saying something to us, whatever it was, and he was anxious to talk and tell us facts: where this man lives, the sort of tree, the sort of rock. And then we asked him through Sandro what he meant by ecotourism. Sandro what was his answer?

Sandro - His response was "to make people look at Nature".

Richard – They took people to take a picture, it's nothing to which we connect with, it's just something to look at. That to me catches what it is he said "I think we try to come back". I keep talking about the difference between '*haciendo*' [doing] and '*siendo*' [being]. He [referring to Leonardo – the guide] was '*haciendo*' while I will try to encourage us all to explore '*siendo*'. It is from that perspective for me that systemic means something. How I connect with [inaudible] to a rhythm. That's me. So, that's what I got [inaudible]. The disappointment I felt was how hard it was for me to stop thinking in the first place.

Sergio Martins – I will make a consideration from Richard's last sentence, since our daily exercise, our work, is to think. For me it is particularly difficult to stop thinking. The only moment I don't think is when I'm playing a musical instrument. In any other, I can't. I have tried meditation, but the music for me is the point.

Richard – For me too.

Fantini - For me, surfing.

Ray - On the subject I was reflecting with Richard on the way back⁵⁶ and this phenomenon I think is a really significant one. It can be explained for me through Heidegger's concept of *phronesis*, being in the moment, losing yourself in the moment. I was relating how I [inaudible] use your example [inaudible] as the same phenomenon in surfing... everything else goes. I had a similar experience in the Open University: we develop our courses in teams. At some times these groups have conflicts but [inaudible] are very productive and very exciting and when the conversation is very engaged I had experiences of being able to say things which the moments clean it forth and then someone would say "say it again". This is being. I was a bit [inaudible] by D'Agostini. It wasn't a profound theory for me because I found it very difficult to stop thinking. I think the main... I spent a lot of time thinking about water, and D'Agostini's difference between availability and scarcity. That's by me. The main experiment was over time I began to see more and make more distinctions. So, the silence allows over time, I think, to make more distinctions.

Fantini - Another thing I asked myself is why we don't spend more time doing this⁵⁷.

56 On the way back from the visit and tour made in the canyons on Day Three. More information about the tour can be found in Appendix 3.

57 Fantini is referring to the visit and tour of Day Three and the attempt of keeping

Ray - But can I ask how the day goes by when you three [referring to D'Agostini, Fantini and Sandro] don't have a conversation?

Sandro – This is very difficult to happen.

Fantini - Specially Sandro and D'Agostini because they share the same office, and Sandro and I because every day we have coffee together.

Richard - But you talk about the same things. The point that you just made earlier, the point of the exercise, was to go to a different place. And enjoying a different place to stop the normal process, not [inaudible] words, not to think, but just to relate, to inter-relate. And Professors, when we run field trips how often do we just stop talking like the guide today?

Fantini - We expect that the model of a tourist guide is the one that talks a lot, that gives a lot of information.

Richard - Absolutely!

D'Agostini – Talking here is good, so why not do this more often? In Antonio Pedro's account he exchanged the world in which he would have lived at some moment, by another, false, which wasn't good, but was real. And tomorrow he will live in a world that he says is not going to be good, and we will be living intensively this world that is not good. And we know it would be good to live the other world. We know from Physics that "there is no free lunch". Would there be an exercise, we are interested in learning, about this, about this capacity of abstracting and living together in a real, not good world? That is, if in the way of living there would be a

in silence while observing the landscape.

behaviour or a conduct that would not lead us to the unwanted behaviour of Antonio Pedro's account.

Fantini - I think so. That is my best understanding. It would be a way to keep us from entering this world.

Sandro - I'm thinking why it is so difficult to stop thinking. But first of all I don't want to feel guilty if I can't stop thinking. Secondly, I remember that I was told that I needed to learn to think. In fact, I never asked what that meant. So, I assumed that I had to learn to think and that I had to strive to achieve this condition. And now here we are discussing that we need to stop thinking. So would it be the other way around?

Antônio Pedro - I really see no reason, Sandro, for this concern to stop thinking. If it is to stop, it is to recharge the batteries to think again. And about music, Sergio [Martins] and Fantini, based on my experience as a music listener, listening is not enough to release the thinking. You have to play, you have to be active. You are listening to Bach, Beethoven, but thinking about the everyday problems.

Richard - Or listening for the mistakes...

D'Agostini - But I think that Richard and Ray think a lot. Much more than it might seem to whom is observing now. But of course we are also capable of turning off. What I said about the stars at night in a certain place... but it is not based on an elaborated procedure. Does this procedure exist in you, Richard?

Richard - That is really a good question. I think as I said to you, the shock in the middle of the day was that I found it really difficult to stop thinking, whereas normally I don't, and I think that is partly because of the stimulation of this and partly because of my obsession with the guide.

Fantini - He was disturbing you in some way.

Richard – Doubtless! We were [inaudible] all the time yesterday, the underlined emotion, the underlined [inaudible]. As you said he acts to talk. But for me, ecotourism is about no talking.

Sergio Pinheiro - I think we all have a way to get disconnected from our everyday life... I tried this with yoga, without much success. Listening to music works best for me. I disagree with you [referring to Antonio Pedro]. That depends; some people achieve this by listening music, others by playing.

Fantini - I think there is a method for this, answering D'Agostini's question. The monks do this, but it takes their whole lives.

Richard - The point I want you have to say, the point I've been saying for this last two days, that says directly there is no point in experiencing without being reflecting. It is the purpose of it, it is to develop or to seek improvement or whatever which I see the role of an academic or an intellectual or since it is personal, whatever. And my experiences in the past have so often been music is that part of my life, thinking is that part of my life and nothing joins them.

Sergio Martins - I would like to make an observation about the meaning of thinking, referring to Paulo Freire. Sandro's concern, who was talking about the need to learn to think, is related to reflexive thinking, which is our academic exercise, of committed academics. I think this is the thinking resulting from reflection, the critical thinking of relating things, of making choices. The other extreme is the emptiness of thinking, which is the case of yoga, of monk's meditation.

And then, when one is talking about music, it is only the feeling, without relating, without criticism, without seeking answers. But there is no emptiness of thinking. Thinking is present, although not reflecting critically. They are different ways of thinking.

Richard – There was a mystic in the 14th century called Bonaventure, who recognizes three worlds: the world of sense experience, the world of conceptualization and the world of spirituality. And if we just hold back thought, for me it is a point of our role in society as human beings, not just as academics, but it is to learn how to deal with the unfamiliar in unfamiliar ways. Those three worlds, those three ways of dealing with the world have since the Middle Age been separated. So the world of spirituality is religion, is meditation, is intuition and is separated. The conceptual world is the world in which we academics tend to live. We try to make sense at the things all the time, and the world of the experience is the world of the peasant, not because the peasant is stupid but because the peasant is trying to reduce risks, and in the absence of firm guides from spirituality and in the absence of understanding conceptual frameworks, the peasant does today what the peasant did yesterday, which is wonderful except that the peasant has three children or plus. So his resources become more and more limiting and his life becomes risky and risky. I would argue the responsibility in the sort of movement we have been talking about is to bring the three back together and if we think to stop thinking it is difficult, integrating these three worlds is practically impossible, but we must try.

Fantini - If you could say that today at the Brazilian Congress, it would be the best time to say this in the discussions about the forest code, because they are discussing about

nothing there. I don't know whether it is just a coincidence but your [inaudible] was just perfect for this situation.

D'Agostini - Previously, I made a question almost as if it were possible to tell me how it is done. Richard then said that there are three worlds, but for me neither the rational, material world that Antonio Pedro condemned, nor the world of the monks serves to make us happy. And it seems to me that we all feel that we need the balance or an adjustment among these three worlds. Perhaps Richard and Ray do not feel that way, but to me they are people who have thought enough about it, have looked for it and try to situate themselves in relation to these three worlds. So they are probably in a better situation than I or Antonio Pedro that need to balance ourselves from what we have lived, do you agree?

Antônio Pedro – Of course!

D'Agostini: - Then it would be always too personal, individual or would there be any way of identifying something we could share when there is an excess in relation to one of these worlds?

Richard - That is an irony, a paradox in my answer. That's for me, as I mentioned yesterday Marcia Salner's work in the mid 1980's, providing me with the conceptual frameworks, so then designing experiences that challenge an onto-epistemology, a methodological framework, whatever, but it is the way we formulate, the way we make sense of the world, which then feeds back about the way we should deal with the world and the way we might want to access inner instance about that. In other words there is a theory of learning that says we are inhibited by the way we learn, by the worldview we hold or we don't know that we have a worldview.

D'Agostini - I will change again. You two, Richard and Ray, have children and you love your children. You would like them to be happy. They have a conduct, they live and behave based on reason, based on emotion. Would there be a condition in which it would be possible for someone to say "my son you are excessively this, or my son you are excessively that" having in mind that she/he is a whole, she/he is a human being in these three worlds?

Richard - In the case of my own children I would certainly recognize two of the three worlds. That is the world of the sensitive and of the conceptual. My children seek new experiences, and they seek to understand, but they are not particularly spiritual, they are not musical, they are not artistic, they are not religious. So, they have minus a world.

Ray - Not sure I have any more to add, really. I want to start another theme or reflection.

Antônio Pedro - I just want to say the following D'Agostini, that I don't know if there should be the concern of seeing how these three worlds are packed inside the people, because nobody is totally none of them. Never. It doesn't make sense to imagine that there is a person who has no fraction of one of them.

Richard - I would argue yes, there is. And it has been summed up by the conversations this morning that a number of us found it extremely difficult to stop the conceptual world. I think it is perfectly possible to recognize it.

Antônio Pedro – Richard, this is possible, it does exist [referring to having the three worlds even if for one of them only a fraction]; it doesn't need a lot, because you need just

to give an ingredient, a circumstance and this is triggered and you will see that practically the conditions necessary for it to appear were a matter of opportunity only.

Richard - Well, I am arguing that in relation to the modern worldview, the techno-centricity of the modern worldview, and the reductionism in particular, takes us away from the synthesis of the integration. And I think question [inaudible] children is exactly the right question because we are there to their “*formación*” [education]. Let’s come back to an issue about happiness, because for me I’ve tried to read translations of Aristoteles and Socrates on happiness. And for me the Socratic notion of happiness through living a considered life is the ultimate to which I want to achieve. That would be happiness and I’ve never been happy in those terms. The Socratic notion is to live the considered life. In other words one is considered of reflecting everything. And so is not just reflective, is reflective of being good, in other words of being responsible, of being virtuous, of being... That is the Socrates position. If that is so, is that the expression of happiness.

Antônio Pedro – What is the connection between thinking and happiness? Does thinking bring happiness to me or should I base my thinking on happiness? I would like to think only of what brings happiness to me because I’m sure that many circumstances are bad for my happiness, and that I should avoid them. Therefore, Richard, should happiness be the most important goal of my thinking?

Richard - May be.

Antônio Pedro - May be? Are you not sure about that?

Richard - I’m certainly not sure. If you are telling me that it is, then it is. But it wouldn’t be for me.

Antônio Pedro - And what you think about it?

Richard - Ah, this is very interesting [laughing].

Sergio Martins - It seems to me very difficult to try to construct the idea of happiness; it's almost impossible. I will you give two examples. The first is the sense of happiness given by the Dalai Lama, for whom happiness is not only in me, but it is also in the other. So, I can only be happy in case I acknowledge that the other has the right to be happy. This is a Buddhist idea of happiness, and although I'm not a Buddhist, it has helped me a lot to understand the meaning of happiness. The second issue, from this, allows me to understand that happiness is when I can express the best of myself, to put out my best potentialities. And there is another new element in my life, which is my grandson. When I'm with him, it is a moment of absolute happiness and I don't need to think about its meaning. And I can spend hours and hours with him, even though he doesn't understand me because he is only one year old.

Fantini – In order not to be contradictory to your first part he is also happy when you are with him.

Sergio Martins – Certainly!

Ray - I want to suggest that the turn we've taken in the conversation has become overly anthropocentric in relation to our experience this morning. But if I take Sergio's [Martins] Buddhists points of relation with the other and the other can be the biophysical world as much as other people. And my reflection is triggered by D'Agostini's experience of walking outside and looking at the stars and how *Homo sapiens* evolved as a nomad who walks their world in doing existence by moving about and when *Homo sapiens* discovered agriculture and became sedentary and technology increasingly mediates

our relationship with the biophysical world. In the 19th century Gerald Manley Hopkins⁵⁸ wrote 'nor can foot feel, being shod'. We now live in a world where over 50% of the people live in cities, which means for 50% of the people, if they walk outside they will not see the stars. We have stories in Australia of Japanese tourists coming to Uluru, a big rock in the centre of Australia, and they were breaking out in tears as they expect the stars they have never saw in their life. So, I want to extend also the notion of technology and suggest that the conceptual world that we have built has become right the centre of what I call social technology which also mediates our relationship with the biophysical world. And at unless we can address this relational dynamic, then the synthesis of Richard's three models, so I'm saying the job is much more difficult.

Richard - Even more difficult!

D'Agostini – Very interesting, especially this about Hopkins. Amazing! I would like to connect it with what Sergio [Martins] has said about not having to think to be happy when he is with his grandson, with the issue that I had brought to Richard about a way of approaching the three worlds. We have a fact: Sergio [Martins] is happy and he doesn't think. He thinks he doesn't think. So, it's not just in thought, but he knows he is not thinking anymore, so he thinks. He is thrilled with his grandson and started talking about a notion of happiness that is essentially spiritual. Could it only be felt when the three worlds are present?

Richard - I think so. And I would question, I guess, the notion of happiness with grandchildren. I have seven

58 Gerard Manley Hopkins (28 July 1844 – 8 June 1889) was an English poet and Jesuit priest, whose posthumous fame established him among the leading Victorian poets. Available at: https://en.wikipedia.org/wiki/Gerard_Manley_Hopkins. Accessed 20 February 2020.

grandchildren. I am talking about the three worlds connected. When I am playing with my grandchildren I am imbued with joy and love but I'm also considering the world in which they have been born and in some way my grandchildren trigger questions to me. Because I love them it makes me think more than I used before. Because soon I will die and they will have another world in which there will be five times a number of people in the world, the world when I was born.

Fantini – Thank you for saying this because I have the same feeling in relation to my two daughters. I think about it every day. I'm afraid of the world they will live.

Sergio Martins - These are two different moments of feelings. The first moment of the direct connection is distracting; the second is no longer that moment, it is more rational.

Richard - It is unlikely that the three worlds that I'm referring to could ever be in the same moment. Like the river, dynamic.

Antônio Pedro – When somebody is completely happy, I think she/he doesn't think. Perhaps this happiness is then the argument to think a lot, but the happiness of life when it is inebriating you, I think that at that moment there is no thinking, and this applies for any situation.

D'Agostini - But in this case, Antônio Pedro, you are taking away thinking from happiness.

Antônio Pedro – I'm taking away? In the moment you are enjoying happiness, you don't think. You are enjoying happiness and that's it; it's a moment of drunkenness.

D'Agostini - With which of the three worlds do I enjoy happiness?

Antônio Pedro - D'Agostini, this is a matter of organization, only. Happiness is not a model, happiness is a feeling.

Ray - I think that the way I will interpret Sergio's [Martins] experience is that in the moment with his grandson he lives in the emotions fused with love, and when you live in emotions fused with love you bring together, I think, the spiritual and the existential, and that the conceptual is always after the event reflections.

Sergio Martins - I agree. I think it is exactly so.

Ray - What Sergio's [Martins] reflections reminds me is how little of our life we did fused in love, how little of our life is characterized by those features.

Sergio Martins - It's true. This is what I keep thinking, how few are the moments when this is present.

Antônio Pedro - But I would like to resume the discussion Richard, of how to think is a matter of happiness.

Richard - Or to pain [laughing]. Let me go back to Socrates. It relates to Ray's comment about anthropocentricity. To live the considered life would be that you consider anything, you consider human being, you consider Nature, you consider whatever you want to call it, other people, and that is a constant work and to understand all that I would argue we need the three worlds and to understand that integration as being, not as thinking or being spiritual. Indeed happy is being. The point is that whilst we like to see them as integrative, we separate.

Antônio Pedro – There is never one alone. They are always together. A little, at least.

Richard - Well, may be. By asking the question “the thinking makes me happy”, that may separate out one of the three. It is one of my criticisms of system’s movement that it adopted the language of system’s thinking. That to me is wrong. Stop systems thinking! It’s systems being, of which thinking is a bit. And when we say systemic thinking, the paradox is we go the recipe.

Sergio Martins - I imagine that all of us at some moment, I particularly have had many, experience a sense of great happiness when, for instance, reading an academic text we understand a certain issue, which for me is a proof that these things are together. I’m exercising a rational thinking to understand a certain issue and at that moment I’m able to cry when I understand it, and that proves that the rational is along with the emotional.

Fantini - If you, Richard, had to tell a dean or a vice-chancellor that you are going to start at a university a new field of study about systems movement and not just systems thinking, what name would that have?

Richard - I did. As I said yesterday what I wanted to call it was not allowed. So your question is a very good question. That if you try to introduce something that is profoundly different, this is all my argument, why call [inaudible] institutions? Because institutions can’t deal with it. The church can’t deal with it, the Academy can’t deal with it and all the meditation in the world is not going to bring the integration together.

Fantini - If you have to tell it to a friend that “in that University I’m doing...” is there one word to describe it?

Richard - Systemic development. The reason, the perspective of the idea that systemic for me means, what I have

been talking about, the integration of things and the notion of wholeness, etc, etc, we will talk about it within the movement. But at the time people kept talking about systems and the notion was they were things, systemic, as we said yesterday, is an adjective. It says that what I'm about to say, the noun, or in my case an adverb as a word, is a special sort of way of doing it. Then the development suggests, is based again on [Marcia] Salner's work and others, it says I will never be able to deal with systemics until, and at last, my acting is developed. So, systemic development, and anything there, is first and almost a function of development "*aqui y ahora*" [here and now] of the total human being. So when people ask me what I do, I work in systemic development and I then explain it.

Ray - At the Open University we have done exactly what Richard wouldn't like. We are developing a new Master's Program and call it System Thinking in Practice. Which is a shorthand for thinking practice dialectic. The problem with labels is that they have to talk to people.

Fantini - That's why I was worried about it; that's what I meant with my question.

Richard - The issue would be I want somebody to come back and say what you mean by that. And I insist in the joke, don't worry about to say. When I first visited the United States in 1981 or 1982, I was in a taxi in New York and the cab driver, as New York cab drivers do, talked and he made a statement and turned around and said "You know what I mean?" and I said "I *haven't* a clue what you're talking about" and he was really offended. Now what I have said ever since then, I just finished living in United States for seven years, I think that is an extremely important question. "Do you know what I

mean” becomes a credible important question because most in the time we have no idea what somebody else means. We learn not to question, we learn not to contest, we learn not to listen and so we go through life without any one really questioning anything. So the point of development is that there is augmentation going back to the Greeks: thesis – antithesis – synthesis.

Sergio Martins - In the e-mail I sent you [to the participants], one of my concerns was that on Friday⁵⁹ we could ask new questions. That is the most important issue to me, that we are prepared to improve [our questions]. Particularly, in my university course, I insist with graduate students that the best contribution I can make is to help them ask better questions, because I don't have all the answers. And this is a problem because students understand as a good professor the one who has all the answers, and therefore I don't know if I'm a good professor.

Richard - I am sure you are. One of the questions to me of involvement in ethics, which I have been for 10 years, is that there is no right answer. We need to find processes by which we agree that whatever is we want to do is, as I say, the right and proper thing to do, which is a value judgment and unfortunately in education in most places in the world ethics has a very low priority.

Ray - One way of making some of these issues practical is when I am facilitating a group I start by asking people to agree to a contract and two of the contract items are to avoid agreeing with your own misunderstanding, and the other one is to provide others with the experience of being listened too. There are others as well.

59 Sergio is referring to Friday, May 13, 2011, the last day of the conversations.

D'Agostini – Do you have to sign it?

Ray - [laughing] A verbal agreement. I always invite people to agree and they rarely refuse [laughing].

Fantini - This is something I always remember from you [referring to Ray]: “you have to listen more; you have to learn to listen”.

Richard - As someone wants to say, when we pretend to listen until waiting for our turn to say something. I think that's very wise.

Ray - It is very difficult to listen. For me, listening means giving someone your undivided attention to show emotional rapport in your listening.

Sandro - After Richard has said that normally listening is nothing more than waiting for the turn to speak, then we have to define what it means to listen because we normally assume that we are listening when we are not really listening.

Antônio Pedro – Is listening to wait for my turn? [most people laughing]

Sandro - We assume we know how to listen. But what does it mean to listen? Is it accepting the argument of someone? Because we are also listening when we look into the eyes of other person.

Richard - One of the few disadvantages of working in two or three languages is precisely that you have to listen.

Sergio Martins - I want to say that I'm really grateful for the attention, for the way that Ray and Richard look at me when I'm asking questions.

Richard - I work a lot with people in other languages.

Ray - I would like to invite Sergio [Martins] to feedback to us on Friday about his most important new questions.

Richard - Everybody!

Sergio Martins - This would be a good task for all of us!

D'Agostini - I want to tell an experience, since I have introduced the word happiness here in our conversations, and because I read about it and I was never happy with what I read [most people laughing]. I want to speak about Richard's experience this morning about the river and the sounds of the river. I can't remember which Brazilian poet or singer who once said that there is no happiness, there are only happy moments. From this I built my own understanding of happiness. Sergio [Martins] is happy when his grandson is on his lap, and in relation to the three worlds, at that moment he is emotionally happy, which corresponds to a sound of the river. So that's why the poet is right, there are only moments, when the sounds of water coincide with the moment of happiness. [This is] My understanding of happiness.

Sergio Martins - Very beautiful!

Richard - Thank you!

V

Day four: Thursday, May 12, 2011⁶⁰

In Day Four the conversation was held outside the Pousada, and turned its focus to epistemological issues. Starting with the distinction among technique, method and methodology the importance of epistemological awareness in education and research was highlighted. The conversation went on discussing the dominance of certain epistemological traditions at the university and how they can prevent or make paradigm shifts more difficult. The conversations of Day Four have shown why it is necessary to have conversations “that get to the level of epistemology”.

60 Unfortunately, the beginning of the conversations on Day Four is missing.

Richard – [...]. The second level encompasses the first. It is learning about the process by which you are learning. The method. So the first is technique. The second is method, which is knowing about the technique. Level two, it is called metacognition. The third level is the epistemic, which is where we confront the epistemological, ontological, cosmological frameworks. That is when method becomes methodology. And they are, I think, very important and [have] profound differences. So we say at level 1 we deal with the matter at hand, the objective of research, “*la cosa cualquier*” [anything]: the phenomenon, the thing, the object of the research. The second one is the objective of the process by which we deal with the first one. Process is level 1, method is level 2, and methodology is the context. What happens for so many researchers is that they stop at level 2. In fact, they rarely go beyond level 1. They keep doing the same method. To change a method is important but to change a methodology is, as we were saying before, a paradigm, just a paradigm. Systemic is a methodology.

Antônio Pedro - I want to say that we have courses on research methodology, but the main issue for me is the content that is taught in these courses.

D’Agostini - The existence of a course on [scientific] methodology is not a contradiction.

Antônio Pedro - For example, if in the course of research methodology I discuss with my students which is the role of the scientist in society, I think it would be a great content.

D’Agostini – So, is it possible to teach how to do research?

Richard - You can teach method. You can teach methods, different methods. But unless you question the epistemology,

there is no transformation. So the three level model are three possibilities for transformation. Transformation number 1 is to seek a different explanation for the same phenomenon. Transformation 2 is to look at different ways of looking at the phenomenon. So the difference between phenomenology and empirical science. The third level is to question the very nature of knowledge, of reality, of cosmology, of ethics, of values. So the transformation at level 3 is huge potentially compared to level 2 and level 1.

Sergio Martins - I want to ask a question to everybody, based on a finding. I'm not aware, in the Post-graduate Programs in which I participated and that I had some experience, of a scientific methodology course that attracted the students, that the students felt interested. The issue is why students don't feel attracted. The issue is not on the subject but, perhaps, in the way the subject is approached, because it is to be expected that a post-graduate student would be interested on this subject. It was to be expected that in a post-graduate program, scientific methodology would be the course, I would not say of main, but of greatest expectative, wouldn't it?

Richard - There are many answers, of course. The type of students who come to university these days in my country is not interested in anything other than a ticket for a job. Secondly, there are very few scholarships and so they have to work. So university has to be a short experience each day. The third thing is faculty either do not understand these differences or is not interested in exploring them. No time. Science is more important than the philosophy of science. The Administration promotes faculty for doing research, not for questioning research. *E se murieron todos los filósofos* [and all philosophers died]!

Ray - In contrast, in Britain, in England, the Research Council who puts up a lot of money for research and funds most of the scholarships, insists that all students have research training, and epistemology has to be part of it. It is mandatory.

Sergio Martins - What I find serious in case of Brazil, coming back to the CAPES system⁶¹, is that the Post-Graduate Programs have been organized having as objective to educate professors and researchers, and the Post-Graduate Programs have justified themselves with this aim without, however, fostering the education of professionals for the productive sector. CAPES supports Post-Graduation to train professors. Post-Graduation [in Brazil] was born for that.

Sergio Pinheiro - I wish to get back to Richard's point that student's interest is only to find a job. CAPES suggests courses with this profile, but students who can't get jobs can get scholarships. So, students with scholarships, without a job, but who are hoping to get a job. And then CAPES' idea does not coincide with that of the students. I would like to know if this is also happening in Research Councils in England.

Ray - Thinking about your question and in England, there are several research councils. One is the Economic and Social Research Council, there is a Humanities Research Council. It was the power of the social science researchers working in concert that meant the natural science did not dominate the arrangement. Whereas in Australia, the natural scientists still dominate the politics of research.

Fantini - In Brazil, it is biochemistry, medicine and physics. The three dominate everything.

61 For a description of the acronym CAPES see footnote 26.

Ray - In Australia, these days, medicine always dominates but has separate research funding.

D'Agostini - I am interested in my problem. I understand the three levels, but how do I know where I am in relation to them?

Richard - Here is an answer. As always, a story. I was working in Central Australia, many years ago, with a group of people who were interested in exploring the future through scenarios. A group of Americans who had decided that it would be a good thing to go to talk to the Indigenous Aboriginals about what was their view of the future. So there we are, at Uluru, the big rock. There is a sign at the bottom of the rock "Please do not climb this rock. It is sacred". Underneath that it says "But if you must we have provided a guide rail". The Americans climbed the rock. They offended the Aboriginals. The Aboriginals therefore rightly refused to talk to them. Two of us met with two Aboriginals and they explained that they did not want to talk to us but they had no concept of the future anyway. In their language, there is no word for the future. No word for progress. No word for development. Our white guide says he will explain to us the Aboriginal position. Here is a small pool. We are in the desert, there is this small pool of water. There are some shrimp swimming in the water and the white guy says that when it rains, rarely, there are shrimp appearing in pools on top of the rock. I say "how do you know that"? and he says "because I have climbed the rock." And I said "but this is sacred". So he is annoyed with me. He then goes on to say that the Aboriginals believe that when it rains the shrimp appear because the rock dissolves and becomes a shrimp and when the rain goes away, they go back to being the rock. But he said the real reason is that the shrimp down here lay eggs, the water evaporates, the hot wind carries them up

into the air, when it rains they come out, there is water, they hatch and there is the shrimp. And so I say to the guide “what is wrong with the Aboriginal explanation? Why is the scientific explanation better than the Aboriginal explanation”? He said “because I can prove it”. And I said “so can the Aboriginal”. And he said “that’s stupid. The Aboriginal idea of life and so on. Their idea of knowledge is wrong”. So I say to this guide “how come they existed for 40,000 years in a civilization that has not affected, with the exception of fire, the Nature of Australia. In contrast, those who know how shrimp arrived on the top of the rock in 200 years have totally damaged their country”. The issue of knowledge in that case is extreme. To take students or to expose students to that, that there are other forms of knowledge which have different forms of validity, different forms of proof, is a shock to students who believe there is only one way of knowing and that is science. So in answer to the question, the issue is to expose young people to different ways of knowing, different qualities of knowledge as equal, if you will, depending on the context. So if you want to farm shrimp, if you want to grow them, science is terrific. If you want to live for 40,000 years I prefer the Aboriginal way of knowing. That is the mysterious end of the story. Why does it always take me such a long time to plodder an answer to question? [laughing]

Sandro - I am not looking for answers, but why in the last 20 years have universities become the kind of organizations they are now?

Richard - I would argue we’ve never learned about epistemology. If you talk to philosophers, epistemology is a very, very small field. And there is a romantic notion of why universities used to be. Ever since Immanuel Kant who brought in rationality, or Descartes, 200 years, it’s been the same.

Ray - The epistemology wars which have run for many years are still running and the American scientific model dominates. And that has been aided by governments who want to pursue expansion of opportunity through higher education. So to massify, which is built on a false foundation because it thinks learning is a linear dissemination process rather than a conversational, transformative milieu. And even worse in Australia, higher education became seen as an arm of trade, so it becomes global competition. Perhaps students come and study. Education is our second highest overseas earner. Part of the expansion was of a utilitarian ethos in which business helped determine the curriculum. So education was a tool for business.

Antônio Pedro - A Vice-Chancellor already said here in Brazil that education is commodity.

Ray – So, I am not in favor of elite education but when universities were elite there was certainly a possibility for more...

Richard - I would argue that it was nothing more than a possibility. It never happened. It is a romantic ideal. It hadn't changed since Immanuel Kant. And examples Ray give are simply the modern expressions of exactly the same phenomenon of positivism. *No ha cambiado* [it has not changed].

Ray - I want to argue with Richard.

Richard – This is good.

Ray – I was able to go to university as the first in my family because the State gave me a scholarship to go but in those days with a scholarship I didn't have to work at the same time. And in the main site we lose track. We think too often that

the purpose of the university is embodied in the curriculum but it is embedded in the network of relationships.

Richard - A set of relationships driven by positivism.

Ray - No! No! No! I mean, it depends. Sometimes you are lucky, sometimes not. I would argue in different disciplines that dominates, sometimes it doesn't. If you have a richer view of student interaction, then those things become challenging even when academics don't. But I finish my argument with Richard. We agree that we disagree.

Richard - The reason why we disagree? It's important. The most important point that Ray said, in my opinion, was that there existed a possibility of criticality in epistemology. Like an ideal world. In my opinion, it never happened historically because if you look from the moment the world started scientific research from Bacon, the moment of industrialization, which started in the 17th century, one paradigm has dominated and it is incredibly resistant to change. Yes, in my days of elite education, there were times to be reflective. When I was a student there were student revolts in Paris, in Latin America, in London School of Economics, but the students were not revolting against epistemology, there were revolting against the administration without much thought. And when they were given freedom to learn, that freedom did not include an epistemological challenge. This is my opinion.

Ray - A very convincent opinion [most people laughing].

Sergio Martins - But our universities, despite the small space for epistemological discussion, have their episteme: the dominant epistemological paradigm.

Richard - For 5 years I was involved in a project here in Latin America called "El Nuevo Paradigma" [The New

Paradigm] with philosophers, also a “brasileiro”, José de Souza, *y no pasa nada* [and nothing happens].

Sergio Martins - I would say that in Brazil several movements in the 1970s and 1980s tried to build a new epistemological paradigm. But I think this has happened more in basic education, elementary and secondary education, than in higher education, in the university.

Richard - In the church, liberation theology and [Paulo] Freire.

Ray - There are more two other I think important variables about your [Sandro's] original question. In the West at least, not sure in Latin America, Oxbridge, we say Oxford and Cambridge, Harvard, MIT, have become the global brand of what it is to be a university and in Australia we've done away with differentiation. So every university is modelled in the same way and with that has come technology, the technology of measurement in the Foucauldian sense. So, Foucault's panopticum of observation has put globally all academics under observation and measurement. Donella Meadows says it is really important who controls the rules, and it is big science, medicine, which controls the rules of all the university.

Fantini - Not surprising. In Brazil it's the same thing.

Richard - We must not be depressed.

Ray - We must resist.

Fantini - So it seems that forces from outside the universities are directing the path of the university?

Richard - No. Academics are lazy for the very reason we do not explore epistemic. It is too difficult. We say we do not have time. Academics have become a trade.

Sergio Martins - I would like to make a remark on that. I believe very much in the power of a public policy. And while Richard was saying no, that this is an issue internal to the university, I wondered who were the Brazilian Ministers of Education in the last 30 or 40 years and with a great power to determine the episteme of the universities. Then there is a force perhaps coming from the outside which is considerable.

Fantini - I was also thinking about technology.

Richard - This connects to Foucault. The power is the way we interpret it. We could have said no. We never did. Students revolted, very few faculties revolted in all the world.

Fantini - It's a shame!

Ray - In Australia, I think it is similar. We had a prime minister for 10 years, luckily when I was in England, not in Australia. His name was John Howard and he was a lawyer but he did not go to university. He studied and he hated university academics and he thought they were left wing trendies, latte drinking, so he pushed down funding for all universities in Australia, so that it was at the bottom of the OECD [Organization for Economic Co-operation and Development]. And the universities didn't fight. And then the Labor Party won the election and they have now been in power for 3-4 years.

Fantini - Four years. They started in 2007.

Ray - And they have not increased any of the funding because universities have lost all support from the general population. And so they have no political power.

Antônio Pedro - I want to make the following observation, given what Ray is saying. In recent times, here in Brazil, there has been a very great change of power in the university.

Sergio Martins – The political dynamics has changed a lot.

Antônio Pedro – Formerly, the Vice-Chancellor was the representative of the power of the university; now the Vice-Chancellor represents the power in the university.

Ray - I understand [inaudible].

Richard - I maintain my position. Irrespective of the way the institutions have changed, the paradigm has not. And it does not make it any worse or better. I think all these things are incidental to the fact that the paradigm has not changed and the universities for 200 years had the opportunity to do it and they didn't.

Antônio Pedro - And with that, what happened is that today we didn't fight anymore to preserve the power of the university but, rather, to maintain the power in the university. And this, in my opinion, was a great tragedy.

Richard - That is all incidental to the fact that we have 400 years of intellectual effort and we failed to challenge it on any substantial ground at all.

Sergio Pinheiro - What can we do?

Richard - Now? *Nada* [nothing]! Within the institutions, nothing. We engage with the public. As we said the other day we become a movement, we become public intellectuals in the sense that we have processes, not to know the answers, and we pull the universities. We just waste energy and try to change institutions. It is much better, in my opinion, now [overlapping conversation]. We can stay at university and earn our money but don't waste time [inaudible].

Fantini - I will not feel guilty anymore for not participating in many things that I had to.

Richard – No [agreeing]!

Sandro – That's what I said to you [referring to Richard] the day before yesterday. I don't know if I have interest to be again part of the postgraduate program for the same reason.

Richard – No [agreeing]!

Sergio Pinheiro - If we promote conversations in different networks, perhaps we will have different contexts for different perspectives.

Richard - If the conversation gets to the level of epistemology, then it will be effective, and that is what to me is the big disappointment about systemics. Because people within the system movement continually fight with each other: this method is better than that method, this process is better than that process, you are better than me, I am better than you, bla, bla, bla. And it is not regarded as an epistemological issue, except by a handful of us. It is regarded as a set of methods, or processes improving efficiency. And it's an opportunity to be an epistemological challenge, a poly-epistemology rather than a single epistemology. This is why I get very, very enthusiastic about this sort of thing. Music is a paradigm. It is a way of exploring reality, nature, stories, in another way. That's what we should be doing both as a metaphor and in fact: gathering stories. You are doing it and listening to them, listening to what people say and what they mean by better.

Ray - Despite what Richard says, he is still working inside his old university to change the rules. That is not his whole attention but he hasn't fully given up. I don't disagree with

Richard' strategy about the movement evaporating outside. But if you find yourself in a position to influence that change in rule, then you should do it.

Fantini - This is what we have discussed a lot in our university. Should we really get engaged with this people? Do we have more power to change things being inside those groups where things are happening or should we forget any institutional level to try to intervene?

Richard - Let me explain what it is I am doing within my current university. The arena. I am working with the Vice Chancellor, the Rector, who happens to be a friend of mine from a long time back. And I work as a Professor Emeritus. And what I am trying to help her with is to explore how academics engage with the community, not outreach, not extension, not service but engagement, as we are doing this week. Listening? And together moving to a different place. I am, as Ray knows, not a great fan of Humberto Maturana. There is one thing however that he said that I think is wonderfully wise. He said that conflict is mutual negation. The only way to deal with it is to move forward together to a new place. That is what engagement attempts to achieve. The university does not have answers about huge issues in society today and neither does the citizenry. But the citizenry has a lot of experience, has different epistemologies and together with the academics, the intellectuals, we can move to a new place. That is what I am trying to assist our university and the good news is the university's Vice-Chancellor is extremely supportive for whatever reason. Certainly not because I am a Professor Emeritus [laughing].

Antônio Pedro - But you don't think that the university has in the students a tool to change society?

Richard - As I said, it exists as a possibility.

Antônio Pedro - I think the greatest responsibility of the university, the greatest work it can accomplish and the first commitment it has to make is with the student it receives. And the greatest contribution it can give to society is to receive a youngster as an unpolished stone and give it back faceted four or five years later. And with this, in the first place, we reveal the geniuses, the qualities of human beings to their full potential. And with that we also begin to recover some of the elite power of the university, which we have already lost. Because a student that we return to the fullness of his/her potential is the best way we have to contribute permanently to the transformation of society.

Richard – Yes, theoretically.

Antônio Pedro – Then there would be criticism: how are we going to pay off the social commitment we have with society if we are only concerned about the student? This is also not true because when we give this student back we are contributing to society. But what we may need is to turn the university into a tool to...

Richard - We keep returning to this idea of instrumental transformation. He said it. Society doesn't want radical, critical.

Sandro - I don't like very much the idea that university and society are separated. It is not so because universities are part of society.

Richard – So they say.

Antônio Pedro - Exactly. And what is the student?

Sandro – It is part of society.

Antônio Pedro - Then we are acting directly in society. Now, of course, what surrounds us, the surroundings, if you want to call it society, is charging us certain things from which there is no escape. And at this moment, abandon, forget the structure of the university as an issue of teaching, and think systemically in such a way that the centre, the fulcrum of all research and extension activities, and search of knowledge, etc, be accomplished through, for instance, an institute of advanced studies. In this institute the themes would be the great subjects of attention, as for example famine, environmental conservation, urban mobility, public security, and so on. That is, all possibilities of knowledge of society would integrate in this theme. In other words: the exercise of *Universitas*. And not a course, or department, because university departments were constituted as a beautiful administrative solution. But from an academic and university point of view, of the university's needs, it was a tragedy.

Richard - That would work only, repeating the scene, if when we brought different groups together to work within themes they brought the facility of critical epistemology.

Sergio Martins - It is not enough just to put together different themes.

Antônio Pedro - When you say these things Richard, that it is a matter of recovering epistemology within the university, then you are pointing a path.

Ray - I am offering a reflection on what I understand Antonio Pedro has said. I interpreted as an expression of a deeply held worldview and as the design of what could be possible. Which I think most people here share many things in common. But a key systemic issue is the couple systems-environment.

A system is always a shorthand for a system environment relationship. So whatever we imagine has to be, the possibility has to exist that this coupling will be viable in the future. And in Australia, one thing that makes this vision, in my view non-viable, is a fundamental shift in ideology in the 1980s which moved university education from a public good to a private good driven by economic rationalism. My worldview is that universities should be sites for transformation of a society. And interestingly, if you go back to Cardinal Newman⁶², who you may know better than me, I am not a Catholic, he articulated many of the features of graduateness [the characteristics of a graduate] which he thought universities should produce. And many of the features of graduateness were similar to the things being discussed here. But they are no longer held in universities as features of graduateness.

Sergio Pinheiro - I have a question for Ray, for Richard, and for all of us. I have worked with paradigmatic shifts in my PhD, and would like to know if society in general, when we speak of movements from public to private goods, and this is driven by economic rationalism, I'm wondering if society in the last 20-30 years has in fact been driven just by economic rationalism. I think they don't like the idea of changing this worldview. What kind of shock in our social interactions, in our conversation, could stimulate this transformation? Because I do not know...

Ray - It is a big question for us.

62 Saint John Henry Newman (21 February 1801 – 11 August 1890) was an English theologian and poet, first an Anglican priest and later a Roman Catholic priest and cardinal, who was an important and controversial figure in the religious history of England in the 19th century. He was known nationally by the mid-1830s, and was canonised as a saint in the Roman Catholic Church in 2019. Available at: https://en.wikipedia.org/wiki/John_Henry_Newman. Accessed 06 March 2020.

Richard - I really honestly think we keep digressing to a situation that we all accept but about which we can do nothing. To keep talking about the university and what it could do is fantasizing. It is not going to do it no matter how much effort we put in. Because paradigmatically we never have. That is why innovations continually fail from within the university out. And that in terms of my position, as an ex-academic, is like the experience in Costa Rica, as a movement of people who are going to have much greater influence. We are working with the citizenry and maybe politicians than we ever are within an institution that is grinding its way.

Antônio Pedro – So, Richard, do you think the changes that can be seen today are much more from outside the university to the university or from the university to the outside?

D'Agostini - Who is transforming whom?

Richard - Well, the two of them with each other naturally, like a dialectic. But if society has had the major influence in the way we have been talking, it's been commercialized, it's been run by science, technology, medicine... Who's fault is that? Ours! Why? Because we didn't deal with fundamental intellectual issues, like epistemology. And we are trying to catch up. So I am not depressed by it. I am just simply saying that I think it is more [inaudible].

Sergio Martins - I want to give an example to Richard. When Carlos Nobre, [former] director of INPE⁶³, came to give a talk in the university about global warming, I was surprised because according to him the alternatives to control global warming are in the movements of society. That we should not

63 INPE = Instituto Nacional de Pesquisas Espaciais [National Institute for Space Research] linked to the Ministry of Science, Technology, Innovations and Communications of the Brazilian Federal Government.

expect for solutions coming from politicians, and although he didn't mention it, I inferred that we shouldn't expect that from the university either. It is a matter of fact that today at the Federal University of Santa Catarina very few professors address the issue of global warming. NUMAVAM⁶⁴ is one of the few research groups working in the development of adaptation strategies to global warming. In other words, possible paradigms shifts are really in the movements of society, as well as how to deal with big issues. The issue of global warming, for instance, is being discussed to some extent in OAB⁶⁵, the CREA⁶⁶, other entrepreneurial organizations and other places that, it seems, are further than the university itself.

Richard - In Australia, it is worse. In my university, we have a 60 million dollar climate change project with no connection with the citizenry at all. And society has now turned in the last 4 or 5 years, and Ray knows much more about this than me, as at one stage being concerned to do something about climate change, to now moving in a sense against it. At the same time feeling guilty about not doing anything because the government has reduced it down to a single parameter which is being presented as a tax.

Ray - Economic rationalism again.

Richard - So in our case not only is the university irrelevant in some ways, it is actually working against the whole notion of the citizenry trying to understand. That was tragic.

VI

Day five: Friday, May 13, 2011

The programme of Day Five of the “Systemic Conversations” was shorter than the other days. The conversation took place shortly after the visit to a family farmer, and it was dedicated to the closing of the “Systemic Conversations”. Therefore, the participants made brief statements reflecting on their experiences of having participated of the “Conversations”, and drew a few conclusions.

Sandro - I ask if anybody wants to start...

Fantini - I confess to you that I came to participate of this week without any expectation. Not that something was not going to happen, but in the sense that I had no idea at all what was going to happen. We did not have a schedule planned for our conversations, but I can say with absolute certainty that it was well worth it. And it was interesting, very interesting what happened to us, because although the general theme was "Systemic Conversations" we didn't come to talk about systems, even though it was about systems as well. Therefore, I'm going to take a few certainties, but more uncertainties than I had before. I liked it very much because all participated, what was very interesting because it brought many different points of view. For my work, for what I do at the University, it will take some time to assimilate the consequences, and perhaps at this point, the certainties that I have are those I wouldn't like to have. And that is what will make me think, that it will take some time to assimilate. And to acknowledge that those certainties that I'm taking, are those I wasn't expecting to have, in the sense that I would not like to have them. I would like to thank also for the opportunity. I think it was a moment that, in fact, is up to the work we do and it is not common in our everyday life. We don't have the habit of stopping and discussing a theme with the depth we have discussed, with the freedom that all of us had to expose their own ideas, confronting them intellectually, which is simply what matters mostly in our work. Therefore, for me, it was a wonderful week. I don't remember that I had a similar opportunity at the university. Thank you very much to all of you.

Richard - Thank you for being you.

Sergio Martins - Before coming I had thought of some things and the first one, since we didn't had a format [for the conversations]⁶⁷, was that we would be people with a common objective of letting flow our existence, our being, and I suspected that our being was pretty much the same, of people who have very similar professions and activities; people who originate in a particular relationship with their ecosystems, which have an origin in small cities close to Nature and with this concern of systems thinking and practice, which unites us together at this moment. So, I felt in the practice we did of observing Nature, of talking about it, that this was really proven, and these issues of a common nature were also expressed in speech, in our feelings. The second issue is that I expect to leave as a different person than when I came. Today, I feel this has been fulfilled. The meeting was very affectionate, full of love, that moved our feelings and it made me see that today I'm a different person, and although I can't evaluate it exactly, I have this good sensation. And the third issue is that at the end of our meeting I will be able to formulate new questions. At the moment I still don't have these new questions, but I feel that I have a series of elements that will help me to formulate them. I think we all need a bit of a break now, for a while, but the elements for that to happen were given. I also want to value Richard's and Ray's presence, which was extremely important and fundamental because they acted as catalysts, provoking a more systematized reflection of our conversations. Then I'm leaving very happy. For me it was also a unique week, since I've never had such an experience like this before. It was my first time. It was a very beautiful week and I want to say also of my joy of having shared it with you. All moments were very good for me and I want to thank everyone for having provided me this life experience.

67 More about the format of the conversations can be found in Appendix 1.

Richard – Thank you very much.

Sergio Pinheiro - In addition to all issues already raised by my colleagues, I want to highlight two things that caught my attention during this week. The first concerns the unstructured format we have chosen for our activities. As already commented, we were a little bit worried about this because we are accustomed that everything is objective, planned. I confess that I don't remember any other time that I have participated in something so unstructured. And I see that it was wonderful because we had no limits; we had freedom. We could explore anything – talk about the river, tell different stories, laugh. Many things did happen here. For me it is very important that we had recorded what we did this week, because we had many deep insights to be kept only in our memories. So the first point is that the unstructured form was a very good surprise, much better than I had imagined. The second thing is that I had the opportunity to know a little bit more about systems approaches already during my Master's degree in New Zealand. Later, in my PhD in Australia, I had the privilege to know more about system's thinking and practice with the work developed by Ray and Richard, among others. This was a kind of shock for me. When I did return to Brazil I had the opportunity to work with systems approaches in EPAGRI as well as in Institutions like UFSC/PGA⁶⁸ and in some other networks. Therefore it is very important for me to meet again Ray, Richard and my PGA colleagues in order to have new conversations and insights. From what we learned in our conversations this week I am thinking how to do things in a different way, how to deal with new projects and our daily life

68 UFSC/PGA = Universidade Federal de Santa Catarina/Programa de Pós-Graduação em Agroecossistemas [Federal University of Santa Catarina/Postgraduate Programme of Agroecosystems]. For more information about PGA see also footnote 18.

in a different way. This is the second point which I think is very important, because our normal institutions will certainly keep doing more of the same, as well as our society, and this will probably keep us away of significant changes. So, to conclude, another idea which did emerge from our experience this week is that we will not change our institutions. I think we thought about this and we all agree that it is important to keep the idea of movement. It is also important to maintain our connection in some way. We could have regular meetings like this in Brazil and maintain contact with Ray and Richard in order to exchange experiences. Because it will be very difficult for us to have similar conversations in our normal day-to-day life. And thank you all, particularly Sandro for this beautiful idea as well as Ray and Richard for coming from such a long way. We know how busy you both are and we hope you have enjoyed this experience.

D'Agostini - For now I'll just say I'm very, very grateful. I knew a little of Ray and almost nothing of Richard, and therefore I'm especially grateful to him. I need time to think about what happened to me. Finally, I will leave here and will not think much of you, but I will think about our guide, about those farmers⁶⁹ and the difficulties of that farmer who thinks he makes crafts. Anyway, thank you very much.

Richard – You are welcome!

Antônio Pedro - I came here for a retreat. And I have done it many times in my life, but I have never had one that had so much influence on my reactions. Therefore, first of all, from the bottom of my heart, I want to thank whoever gave me this

⁶⁹ D'Agostini is referring to the visit made to a family farm at Day Five. More details about the visit can be found in Appendix 3.

opportunity. And I think I personify these thanks to Sandro, Fantini, D'Agostini, Sergio Martins and Sergio Pinheiro. I thank you for this gift you gave me. During this week I enjoyed three strands. One, of knowledge. I learned a lot and learned things that I did not expect to learn. They were shocks, and in case you allow me, perhaps this was not the most important thing. The second, because I was contemplated by Nature's spectacle. And the third, for the life I had this week. I lived an intense life because of you, because of this Nature, because of this knowledge. I know this week will be a long week for me. This week does not end today at all. It will go on for a long time because its insights are immense. And in case I have displeased someone, I would like to apologize for two reasons. First, because you are guilty that I have felt very well among you, and I bet in your wisdom and kindness to compensate for my mistakes. We are all educators, all of us, and you were excellent educators for me during this week. To finish, I want to pay a tribute to all of you, educators, reading a text⁷⁰ of Artur da Távola⁷¹ from 1982 about "The Dimensions of an Educator" [then Antônio Pedro read the text].

Sandro - I think there is not much more that I could add. Therefore, I want to thank each one of you for the time you gave to be here during this week, and to say that it was a privilege for me to have shared it with you. Although we have discussed many things, new elements that will certainly help

⁷⁰ The text Antônio Pedro read was, according to him, published (originally in Portuguese) in the magazine "Fatos e Fotos" [Facts and Photos]. In the text, the author reveres educators by identifying and highlighting several dimensions that would distinguish them in the face of the vicissitudes and impositions of the ordinary world.

⁷¹ Paulo Alberto Moretzsohn Monteiro de Barros (3 January 1936 – 9 May 2008), better known by the pseudonym Artur da Távola, was a Brazilian politician, Senator, journalist, and writer. Available at: https://en.wikipedia.org/wiki/Artur_da_T%C3%A1vola. Accessed 06 March 2020.

us ask better questions, different questions, I will also need time to learn how to do this. Many thanks to all of you, also for having entrusted and accepted the invitation to spend this week here.

Ray - Firstly, I'm here because this was an invitation in which I anticipated and realized the deepening and strengthening of relationships. And I'm fortunate that the network of relationship was expanded, and we managed the language issues very well. Fundamentally we allowed ourselves to get in touch with each other at an emotional level which is very rare in Academia. Thank you for that. I will carry many of your individual stories, and insights. The anguish of a young boy with his brother, swimming in the *lagoa* [lake], in the sugar cane field, stars at night, surf, new passion of music. These are just moments. I think for me, the issue I take away with is that as I age I'm finding it harder and harder to find the moment of silence, of engaging with the other, the biophysical world. With the age you have many concepts floating in your head. There are things wrong with our body, you try to listen, but you only hear your body [laughing]. And as you try to walk you have to pay more attention to this [looking to the ground] rather than that [looking to the sky]. I'm inspired to think of how I might bring Nature to me. I envy your passion for surfing, while you can still do it, I'm not sure if this is the metaphor for the world we are living or it was a very sorry statement about me. But for the last few years, the way I have obtained silence and [inaudible] sleep each night is to have the [radio] BBC playing next to my ear. That's I guess my final point. With the strengthening of a relationship comes the notion that there is something in the future and increasingly as someone who feels more like a citizen of the world, than of any country, these relationships are important to me and so I commit you to continuing.

Fantini - Thank you!

Richard - As I say in Uruguay, when you interview a soccer player, *bueno* [well]... I want to say that this is a very serious comment that Latin America has been my teacher in many ways. It was in Uruguay in 1973/74 that I learned the meaning of development because I saw for the first time in my life poverty and I saw the abuse and inequality of the rich against to poor. In Uruguay it was not a concept, it was a reality and it transformed me. The second thing in Uruguay was to learn the difference between learning by doing and learning by being. For me this week has been learning by being, because it depends on the dialectic between what is out and what is in. I think that I have been extremely privileged to being invited into a group of people who have a phenomenal systemicity. By systemicity I mean multi connections through multi criteria to create a dynamic whole and I'm genuine in saying thank you to you all for committing me to be part of your system. In Costa Rica I learned the importance of *movimiento*, of movement, not association, not organizations, and I had two projects in Costa Rica, one was the *Nuevo Paradigma* [New Paradigm] and the other one was *Zoonosis*. In both cases the outcome was movement with commitment and responsibility. The week for me has been an example of what happens when we allow ourselves to learn by being. We have had yesterday, I said we talked about the three levels of cognition. We have in my opinion progressed to the highest level. On the first day, we were talking a lot at the first level about the issue, of teaching, organization, of things. Then we talked about process and we practiced the process. Yesterday, particularly, we talked at the third epistemic level and talked about values, epistemology, onto-epistemology, cosmology, and this was internal movement. The significance to me of particularly

the river is a very powerful metaphor. It moves, it's a result of a force of Nature. It has no mind, it goes where it goes, and often it changes its course. It means that we have to adapt to it like the guy today. It moves from there to there, he moves his system of production into tree which has not only helped him escape the water but, in some ways, managed the water because he has now covered the line. And the final part of the metaphor is just the scale. *Es enorme* [It's huge]! So, one final thing is that three weeks ago I was in Mozambique. As an expert I was running workshops and it was done in two languages. I made no attempt to listen to Portuguese. It was on with instantaneous translation. I understood nothing except as it was interpreted. And thanks to Sandro's generosity I spent thirty six hours in Santiago del Chile before I came here. Nobody spoke in English and I had to work hard to remember my Spanish without translation. So, I had to think. Listening over the last five days I have understood that I can actually understand a lot of Portuguese not by translating, just listening to what is happening and I have amazed myself. Finally, the importance of music. There are a few countries that I have worked, and that is now more than 36, I can't think of a single country where music is as significant as it is in Brazil. I love again in terms of movement the guitar as it moved to you, to you, to you...everybody makes music, everybody sings. It is fantastic. So I have been part of that *aprender haciendo* [learning by doing] for all of those experiences out there, the tremendous relationship you have, the music and how I was welcomed into the music and my music is strange, loud and different. So, *muito obrigado a todos* [thank you all].

Fantini - We thank you [everyone applaud]

Appendix 1: Rationale⁷²

“Systemic conversations among friends”

Praia Grande, Parque Nacional Aparados da Serra,
Brazil

May 9 – 13 2011

1. Rationale

The members (D’Agostini, Fantini, Sergio Martins, Sandro) of the Research Group of Environmental Monitoring and Appraisal (NUMAVAM) have been engaged in a wide range of projects, developing and adopting an approach for the design of indicators of sustainability, adopting systems approaches for managing (and researching) different “messy/wicked situations”, etc. However, not always it has been possible an in-depth reflection about the epistemological assumptions/choices of the adopted practices, or about the addressed issues; nor about the learning processes taking place. So, the intent is to create the conditions to step back of current practices and espoused understandings, enhancing the possibilities of reflection and learning.

With the activity being proposed here the idea is to “create space for emergent systemic conversation” in issues like systems thinking in higher education (curricula design?), environmental performance, social systems behavior (management of social systems?), the design of learning/inquiring systems, adaptation to climate change, etc. These issues might be discussed from an epistemological as well as from a methodological point of view.

⁷² This material together with Appendix 3 has been handed out to all participants during the preparation phase of the “Systemic Conversations”.

The conversations have no previous format, in the sense that they should be preceded with formal presentations. The conversations will be designed (regarding content and extent) according to our wishes and needs. The idea is simply to create the circumstances for the free exchange and share of views, ideas, thoughts and doubts. The conversations will be recorded, with the objective to gather material for a publication (book, paper, etc).

2. Objective

The objective is to engage in systemic conversations to discuss issues of common interest (see above), and which might be considered for further work, and joint new (research) projects.

3. Program

During the whole week we will have two sorts of activities:

- a. before lunch: short trips and visits at Aparados da Serra National Park and to other places around and close to the Park (see please below the visit program);
- b. after lunch: “systemic conversations” at the Pousada B&B Cabana Magia das Águas, in Praia Grande.

Appendix 2: Location of Aparados da Serra National Park in southern Brazil



Appendix 3: Visit programme

Tours at Praia Grande/SC – Brazil From May 8th to 13th

[Giane K.B. Nunes]

Day 0 – May 8th

Arrival in Praia Grande at about 5:00 pm and check in at the B&B Magia das Águas.

Day 1 – May 9th

Walking trail to Malacara Canyon and its natural pools.

The walking trail begins at around 8:30 am, along the Malacara river bed, making some water crossings on the river just below the knees in a rocky terrain. During the tour you can admire the wonderful view of the escarpments of Serra Geral covered by remnants of the Atlantic Forest, being possible to do some bird watching. In the riverbed, the big attraction is the rocks with various colours and sizes depending on the volcanic processes and erosion that happened over the years. At the end of the trail, we'll be close to the canyon cliffs with its grayish color from lichens on its walls. At this point there is a natural pool with crystal clear waters inviting for a wonderful bath.

Lunch time: 13:30h

Duration: about 4 hours

Walking trail level: moderate

What to take: small backpack, towel, hat, sunscreen and insect repellent, camera and rain gear.

What to wear: comfortable clothes to walk (never jeans), shoes (sneakers or hiking boots and socks), clothes for river bathing, extra clothes and shoes to exchange on the way back to trail/lunch.

Day 2 – May 10th

Walking trail to Borges Waterfall.

The trail starts at around 8:30 am. The tour begins driving an old road and continues in the middle of native forest. At this property there is a great diversity of floral species, it is possible to find large old trees. After an hour-walk, the trail takes you to a 40-meter-waterfall that forms a wonderful spectacle inside the forest. Visitors will be invited to swim in clear waters and enjoy the nature.

Lunch time: 13:00h

Duration: 4 ½ hours

Walking trail level: moderate

What to take: small backpack, towel, hat, sunscreen and insect repellent, camera and rain gear.

What to wear: comfortable clothes to walk (never jeans), shoes (sneakers or hiking boots and socks), clothes for river bathing, extra clothes and shoes to exchange on the way back to trail/lunch.

Day 3 – May 11th

Pedra Branca Valley Tour

We'll leave the B&B at around 8:30 am. The Valley of Pedra Branca is formed by the Mampituba river which is the border between the states of Rio Grande do Sul and Santa Catarina.

The attraction of the tour is represented by a valley with hills mostly covered by remnants of the Atlantic Forest, natural pools formed along the Mampituba river and Pedra Branca peak that stands in the landscape. The peak of Pedra Branca is a wall of basaltic rock covered with lichens, which gives it a grayish-white color. During the tour we will take a walk through an ancient drovers path that follows the canyon Faxinalzinho. This is a pleasant walk along the native forest, and crossing the river a few times, noting the great diversity of floral species and with the possibility of some bird watching. The Pedra Branca Valley has an important historical and cultural value as a remnant “Quilombo”. The site served as shelter for the slaves that went down the plateau and took refuge in this difficult access area, making their homes there and forming their families.

Lunch time: 12:00h

Duration: about 3 ½ hours

Walking trail level: light

What to take: small backpack, towel, hat, sunscreen and insect repellent, camera and rain gear.

What to wear: comfortable clothes to walk (never jeans), shoes (sneakers or hiking boots and socks), clothes for river bathing, extra clothes and shoes to exchange on the way back to trail/lunch.

Day 4 – May 12th

Itaimbezinho Canyon trails.

We'll leave the B&B at around 8:30 am and take the road to Itaimbezinho Canyon. Access to the canyon is performed by Serra Faxinal that provides a few contemplation spots to the slopes of the Serra Geral with its canyons, mountains, valleys

and beautiful views of the coastal plain where it is possible to see some lakes and the ocean. From the visitors' center in Itaimbezinho Canyon, we will take two trails: Cotovelo and Vértice. The Cotovelo trail is a 6 km round-trip and the walk is held in part by an ancient road in the middle of the Araucaria forest, reaching the edge of the canyon Itaimbézinho and following the field. In this way we can see most of the canyon and the highest cliffs that reach 720 meters high. After returning from this trail, the group will be conducted by the walking trail that circles the beginning of the canyon (Vértice trail) and provides a wonderful view of the waterfalls. This trail is easily accessible and it is a 1.5 km round-trip. During these trips, we can better understand the geomorphology of the national park and see a great diversity of floral species, and also some animals. We'll have a delicious picnic around 13:00 pm, and after lunch we'll be free to work under the trees at the visitors' center.

Lunch time: 13:30h

Duration: about 3 ½ hours

Walking trail level: light

What to take: small backpack, hat, sunscreen and insect repellent, camera and rain gear.

What to wear: comfortable clothes to walk (never jeans), shoes (sneakers or hiking boots and socks).

Day 5 – May 13th

Visit to an agroecological property.

We'll leave the B&B at around 8:30 am and drive to the property of Mr. Elisha Spido. He is a founding partner of the ACEVAM – an association of agroecological farmers in Mampituba

Valley. He'll present his agroecological Agroforestry System. The farmer is very engaged about ecology, demonstrating the role of each of the plants in the Agroforestry System and the interdependence of species in nature. The property is simple, but lovely, and at the end of the tour, we'll taste a fresh juice made from Juçara palm fruit, commonly known as açai juice.

Lunch time: 12:00h

Duration: about 3 hours

Walking trail level: light

What to take: hat, sunscreen and insect repellent, camera and rain gear.

What to wear: comfortable clothes to walk (never jeans), shoes (sneakers or hiking boots and socks).

Appendix 4: Photo album







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The participants



(From left to right: Sergio Martins, Alfredo Celso Fantini, Sandro Luis Schlindwein, Ray Ison, Antônio Pedro Schlindwein, Richard Bawden, Luiz Renato D'Agostini, Sergio Pinheiro)

Richard Bawden

Has had a long and varied career as an academic. He formally retired as a full time academic in 2007 while holding the post of Distinguished Visiting University Professor-in-residence at Michigan State University in the USA. He was one of the foundation professors (Systemic Development) of the University of Western Sydney (in 1989) and the founding Dean of its Faculty of Agriculture and Rural Development. After retiring from UWS in 1999, he moved to the USA to accept the Distinguished Visiting University Professor position at MSU. He has published widely in the fields of agricultural education, sustainability, transformative learning and systemic development and has consulted in these domains in more than two dozen countries across the globe as well as extensively with many institutions and organisations within Australia. He was appointed to the Order of Australia – general division – in 2000 for his contributions to systemic development. He was made an Emeritus Professor of the University of Western Sydney University in 1999 and he is currently an honorary research fellow in the Office of Sustainability at (the re-named) Western Sydney University. He is also a Visiting Professor at the Open University in the UK, an adjunct professor at Michigan State University, and the Managing Director of the not-for-profit Systemic Development Institute.

Luiz Renato D'Agostini

Holds a doctorate in Soil Science from the Federal University of Rio Grande do Sul, and he is a Professor at the Federal University of Santa Catarina, in Brazil. He is a founding member and former coordinator of the Research Group in Environmental Monitoring and Appraisal (NUMAVAM), and his academic activities were and are mainly focused on the systematization of conceptual and methodological approaches aimed to assess environmental performance in productive processes.

Alfredo Celso Fantini

Holds a Ph.D. in Forestry (University of Wisconsin – Madison), M.Sc. in Plant Science (Federal University of Rio Grande do Sul), and B.Sc. in Agronomy (Federal University of Santa Catarina). He is a Professor at the Federal University of Santa Catarina, where he supervises master and doctoral students in the Postgraduate Program in Agroecosystems. His main interests are interdisciplinary research projects on the use and conservation of natural resources, mainly in the secondary forests of the Atlantic Forest, and he coordinates an action research project with charcoal-producing family farmers. He is a member of the Research Group in Environmental Monitoring and Appraisal (NUMAVAM).

Ray Ison

Is a Professor of Systems at the UK Open University (OU). As part of ASTiP (Applied Systems Thinking in Practice Group), he is responsible with colleagues for managing a post-graduate program in Systems Thinking in Practice. He has held a number of leadership posts within the international Systems and Cybernetics community including Presidencies of the IFSR (International Federation for Systems Research) and ISSS (International Society for the Systems Sciences). His research field is systems praxeology, institutional innovation and systemic governance.

Sergio Roberto Martins

Is an Agronomist and holds a doctorate in Agronomy and a master's degree in Economic Management and Development Planning. He is a member of the Research Group in Environmental Monitoring and Appraisal (NUMAVAM) of the Center of Agrarian Sciences of the Federal University of Santa Catarina, and a collaborating Professor of the MSc in Agroecology and Sustainable Rural Development of the Federal University of Fronteira Sul, with contributions in the courses of Agroecology, Sustainable Rural Development, Interdisciplinarity Workshops, and Social, Economic and Environmental Aspects of Sustainability. He has experience in Plant Science (cultivation in

protected environments), with an emphasis on Agrometeorology, Sustainable Rural Development, Indicators of Sustainability in Agroecosystems, and Agroecology.

Sergio Leite Guimarães Pinheiro

Has a degree in Agronomy from the Federal University of Santa Catarina (UFSC), Brazil, and holds a Master's degree in Farm Management from Lincoln University, New Zealand, and a PhD in Agricultural Sciences from Sydney University, Australia. He was an Agricultural Researcher for 34 years at EPAGRI, the Agricultural Research and Rural Extension Service of Santa Catarina State, and collaborating Professor for 12 years at the Postgraduate Programme in Agroecosystems of UFSC. His field of work involves Systems Approaches, Participatory Research, Extension and Learning as well as Sustainable Territorial Development with Cultural Identity.

Antônio Pedro Schlindwein

Is a former Professor of the University of São Paulo and of the Federal University of Santa Catarina, with teaching and research activities in the fields of Animal Breeding, Population Genetics, Statistics, Research Methodology and University Cooperation.

Sandro Luis Schlindwein

Is a Professor at the Department of Rural Engineering of the Federal University of Santa Catarina, in Florianópolis. He teaches Systems Thinking and Practice in the Postgraduate Programme in Agroecosystems, and supervises MSc and PhD students. He is a member of the Board of Directors of the World Organization of Systems and Cybernetics (WOSC), and his current research interests are related to the dynamics of land use change, adaptation to climate emergency and systems thinking applied to wicked situations. He is the editor of these "Systemic Conversations" and can be contacted at sandro.schlindwein@ufsc.br.

In the "systems community", holding conversations is not something new. Systems thinkers and cyberneticians have a great interest on conversation because it is "the basis of human communication". Humberto Maturana goes even further by saying that "we human beings exist, are realized as such, in conversations. It is not that we use conversations, we are a flow of conversations". The "Systemic Conversations" presented in this book are the emergent outcome of a conversational system resulting from a meeting of friends, interested in reaching mutual understanding and broad agreement on a range of themes and issues. Designed with a certain resemblance to a retreat, the "Systemic Conversations" unfolded over five days at Aparados da Serra National Park, in the south of Brazil. In the words of Richard Bawden, one of the participants, "the whole experience was wonderful with its essence of holism if you will, with the music and singing and the eating together, and the pairing off in walks in the canyons, all being as important, I feel, as the conversations themselves". In other words, the "Systemic Conversations" were much more than just conversations, in a clear example that "the whole is different than the sum of the parts". The conversations reveal how the modern worldview has taken us away from doing synthesis, from the ability to integrate different domains of human existence. The book is also an invitation to the readers to engage in reflexive conversations themselves to reconstruct their own realities, and as a way to improve their ways of being and doing in the world.

