



Transdisciplinary Hermeneutics; Working From the Inner Self, Creating Ecologies of Knowing

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The article argues that transdisciplinarity in general and transdisciplinary hermeneutics in particular offers a framework for people to connect with reality integrating rationality, emotions, the corporal and the spirituality. Such integration is important in realizing our dreams and utopias, as is illustrated with Scharmer's concept of "presencing" and Bloch's concept of "anticipative consciousness". It is equally important in diminishing social inertia vis--vis problems like Climate Change or sustainability in general. This is illustrated presenting ideas of various philosophers, writers and artists, among them Hannah Arendt, Joseph Beuys and Norma Bateson. Subsequently a proposal for a transdisciplinary hermeneutics is presented as a dialogue with Reality, integrating experiential, formal and direct knowing allowing us to connect with both our inner self and the outside world, listening to how we allow the world to disclose itself. Finally it mentions how such a hermeneutical practice can be realized in spaces of imagination and experimentation.

Keywords: Transdisciplinary hermeneutics, ecologies of knowing, presencing, banality of evil, experiential, formal and direct knowing, spaces of imagination and experimentation.

1 Introduction

How does grass grow? I recently came across this question as well as the negative answer that we do not pull it out of the soil. It is not a mechanical process of pressure and counter-pressure but depends on the inner capacity of the grass to grow. It is an organic process of providing the right elements and conditions – water, air, light, CO₂, temperature, nourishment - in what we usually call an ecosystem or ecology. In 1996, the Amsterdam football club Ajax opened a semi-closed stadium ignoring this basic rule. The club provided the grass with water and light but despite of that it did not grow. Between 1996-2008 the club needed to change the entire grass pitch 48 times and only then it decided to change the grass management system adopting a systemic approach taking all the above-mentioned elements and conditions into consideration. In 2012, all Dutch football clubs combined declared the Amsterdam grass pitch to be the best of the country.

I was thinking of that last week while I was attending the fourth National Congress in Research on Climate Change in Mexico City. A recurrent theme was the challenge of making people aware, conscious and acting vis--vis the emerging problems created by climate change. The generally expressed idea was that people lack knowledge of climate change and

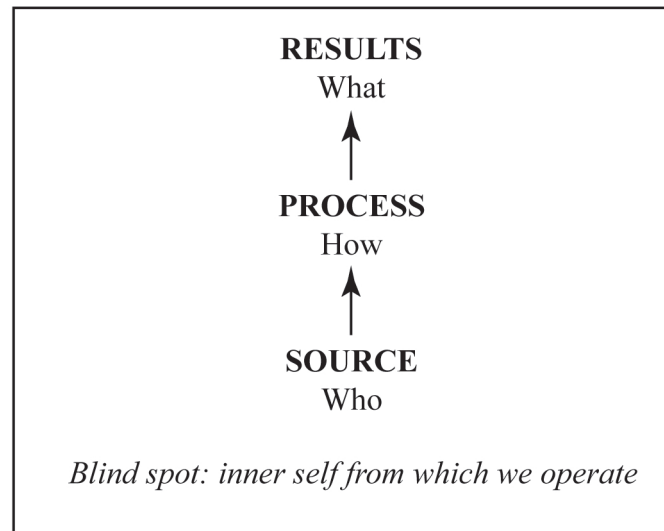


Figure 1: The blind spot of the inner self from which we operate (Scharmer, 2008).

that as a result they are unwilling to act. This idea is not false but very incomplete. It seemed to me as if the participants of the congress wanted to pull the consciousness out of the heads of the population providing them with knowledge, just like the Amsterdam football club wanted to pull the grass out of the soil providing it with water and light. We humans in a way are like grass as our growing and acting equally depends on our inner capacity to grow and act. We as well need to be nourished in systemic ways with multiple and heterogeneous types of knowledges, beliefs and convictions in the form of ecologies in which each type of knowing nourishes the other thus creating a rich and diverse environment. This article explores the concepts of the inner self and transdisciplinary hermeneutics as a way of creating ecologies of knowing.

2 The Neglected Inner Self

Management has long been oriented to the question *what* to realize - the results - and only in the last decades of the previous century changed towards the question *how* to realize the results: the process. This created an overwhelming attention for process management but still left one major aspect untouched, the question "*who*" is managing (see Figure 1). In recent years Otto Scharmer, M.I.T. lecturer and founder of the Presencing Institute¹, created a widely respected management theory based

¹<https://www.presencing.com> (last visited, 28-10-2014.)

on the importance of working from the inner self. Scharmer started to think about the inner self after hearing the following well-known phrase of Bill O'Brien, former CEO of the Hanover Insurance Company: "The success of an intervention depends on the *interior condition* of the intervener". In 2008 he published a book presenting his concept of "presencing" declaring the neglecting of the inner self the key blind spot in management [1].

What Scharmer puts forward is that if we want to connect with the world and change it, we need to first of all be connected with our inner self, our emotions, sensitivity, embodied knowledge, experiences and motivation. This is the essence of "presencing", a neologism that he created out of the words 'present' and 'sensing'. We need to be in contact with the present on a level of sensitivity and feelings and when we do so, we can "tune in" with that what is evolving in the present-now. This equally allows us to tune in with an emerging future and to contribute to the realization of that future. It is the capacity to make a bridge between the present now and the future one feels evolving. Presencing involves an "U-shaped" movement of first opening our minds and letting an emerging future enter (a downward movement); then focusing on condensing, crystallizing and converting that what we feel into a concept or idea; and subsequently realizing or materializing the concept or idea in action (an upward movement). It is a creative/constructive process that, according to Scharmer, works once we connect with our inner

place or inner self.

Last week during the Conference on Climate Change Research, I was granted the opportunity to talk a full hour about Art and Climate Change, and I presented many artists that are working from their inner self, realizing the “U-shaped” movement of presencing that I just mentioned. Interestingly, almost all of them are very successful in getting the attention of the general public and in creating awareness and consciousness. One of them is Eve Mosher who created her widely appreciated project “HighWaterLine, visualizing Climate Change”.

At a certain moment, Eve asked herself what the real consequences of sea-level rise would be for Manhattan where she lives, and started to look for information. She found a map indicating where the water will be when the sea level rises with 10 feet, and based on that information she created her project “HighWaterLine, visualizing Climate Change”². The core idea of the project is to literally mark, with a baseball line marker, the ten-feet-above-sea-level-line in the streets of lower Manhattan and Brooklyn. Eve created a continuous line connecting all buildings, parks and streets in the threatened neighborhoods. In this way she visualized a threat many New Yorkers are vaguely aware of as an abstract menace for the long term. The line turns the abstract into a concrete and visible threat, and connects diverse types of buildings and people that all are together in this precarious emerging future. Eve’s project is powerful and she received many requests to fly to cities around the world to duplicate it. Instead, she decided to make an action guide for communities to enable them to mark their own line using her project as inspiration.

The HighWaterLine Action Guide is designed for working in communities or city-delegations and has 4 consecutive steps. The first is to organize a workshop to explain what climate change is, where it comes from and what it will bring us. This step is based on using formal and scientific knowledge. The second step involves collectively identifying the high-water-line in the city or neighborhood and is based on collective exploratory action. The third step aims at “bringing the line to the streets” using a line marker as Eve did in New York. This step as well is based on collective action in the form of collectively creating the line. The fourth step involves preparing a document and sharing the experiences with the

²<http://www.highwaterline.org> (last visited, 28-10-2014).

wider public, thus advocating climate change as an emerging future. This step converts the participants – the population – from a receiver of climate change messages into a sender of such messages and really involves a paradigm shift in our thinking of climate change communication. I look at Eve’s Action Guide as a proposal to create spaces of experimentation and imagination and as a perfect platform to approach a problem of climate change from the inner self and in transdisciplinary ways, integrating various ways of knowing and doing [2]. Eve never intended to create such a multifaceted and complex project but it merged out of her initial work as an artist that she really started out of her own inner concern, interest and motivation.

What I see in the theoretical work of Scharmer and in the artistic project of Eve Mosher is somewhat comparable to that what the German philosopher Ernst Bloch (1885-1977) called “anticipative consciousness”. Bloch tried to get away from Marxist materialism and utopian thinking with a rather exclusive orientation on the long term. He characterized that as being too binary since it is based on All-or-Nothing. By contrast, anticipative consciousness is ‘Not-Yet-consciousness’ that falls within the horizon of concrete - utopian and simultaneously realistic – possibilities [3]. The ‘Not Yet’ does not exist in a vacuum as it is inscribed in the present, and neither is it completely predetermined as it depends on our actions, motivation and imagination. It is about converting a utopian idea into a considered blueprint or a planned and outlined utopia. This, Bloch explicitly stated, is not reachable without a theory of emotions as it depends on imagination and “want”. Bloch mentions the appeal of dressing-up, the world of fairytales, the travel, the dream-factory of film and theatre that all offer concrete images of better life, especially when turned into a considered blueprint or planned utopia. The essence is that in order to be able to realize a dream and create a new reality, we need to be in touch with our emotions, “want” and motivation and thus with our inner self.

Bloch’s anticipative “Not-Yet” consciousness is very interesting when seen in the context of Nicolescu’s transdisciplinarity and his concepts of Levels of Reality, Included Middle and Hidden Third [4]. Like Bloch, Nicolescu rejects a definition of reality that is merely material and introduces a concept of reality as dependent on the way we are able to see and conceptualize that what is (what he calls Real),

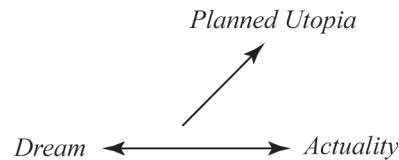


Figure 2: The conversion of an opposite into a unity.

and that is made up of various levels each with its own specific laws and basic concepts (like causality, gravity or speed of light function on a material level and are known through scientific research). Nicolescu introduces ternary logic where an opposition on one level of Reality can simultaneously be a unity on another level of Reality. An opposition may convert in a unity through what Nicolescu calls an Included Middle, in a way like Bloch's Planned Utopia is the Included Middle and conversion of the opposition Dream and Actuality (see Figure 2). Bloch does not talk about levels of Reality and ternary logic but his thinking has many similarities.

Planned Utopia is an Included Middle in between Dream and Actuality that we can see and realize once we are capable of activating our "anticipative consciousness". Here is one more resemblance with Nicolescu's work. According to Nicolescu, we can see Reality in complex and multileveled ways once we are able to connect levels of Reality through what he calls the Hidden Third. Nicolescu conceptualizes the Hidden Third as a connection term or "a flow of consciousness that coherently cuts across different levels of Reality of the Subject and that must correspond to the flow of information coherently cutting across different levels of Reality of the Object" [5]. Once this is realized we are capable of seeing a multileveled reality that is one but discontinuous at the same time, with opposites on one level of Reality that are simultaneously unities on another level.

Seeing such a multileveled and complex reality, or Object, depends on the Subject's consciousness (the Hidden Third, anticipative consciousness, presencing), which means that we cannot see this reality or Object when we do not connect with it from within, on a level of consciousness or from out of our inner self. Nicolescu observes that: "The human being is the unique being in the universe able to conceive an infinite wealth of possible worlds. These possible worlds are certainly corresponding to different levels of Reality" [6]. I would like to add that the possible worlds are certainly also corresponding to – and even

dependent on - the inner self.

3 The Neglected Banality of Evil

Being in contact with our inner self is important in realizing our dreams, objectives and utopias. It is equally important in maintaining a meaningful, emphatic and sensitive relationship with the world outside of us. And unfortunately, maintaining such a relationship as well has become rather problematic. According to Nicolescu this has a lot to do with the dominance of the scientific worldview and its particular way of conceptualizing true and valid knowledge [7]. Science's ultimate goal is to create objective or intersubjective knowledge that exists independent from our own subjective interpretation. Creating such knowledge depends on the application of an impersonal machinery or methodology of formalized methods that allows us to generate knowledge that is valid in all contexts and independent of any specific cultural or historical background. The price we pay for this however is that we disconnect ourselves as subjects from our object of study, action or attention. We thus lost an intimate relationship with the world replacing that for a relationship in terms of abstract descriptions, theoretical constructs and mathematical formulas. On top of that, the huge fragmentation of science in ever more targeted disciplines, sub-disciplines and specializations makes it increasingly difficult to maintain a comprehensive and integrated view of reality. Our relationship with the world is less and less intimate and more and more fragmented.

As a consequence we transformed our concept of the world - nature, ecology, the other, the patient, the organization, society, life itself – from a living subject into an object that we analyze in merely clinical 'scientific' ways. According to Nicolescu, this has far-reaching consequences: "the Man-God relationship became a Man-Object relationship, of which the only result can be self-destruction" [8]. The double fragmentation - of the human being and

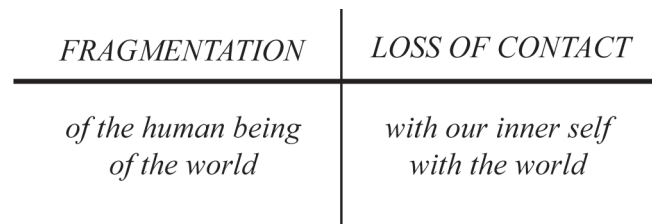


Figure 3: Double fragmentation and double loss of contact.

of the world - and the loss of contact with both our inner self as well as with the world around us (see Figure 3) makes us vulnerable for manipulation and easily susceptible to consumerism, conformism and inertia. The apathy in responding to the emerging problems related with climate change needs to be seen in this context. A lack of knowledge certainly plays a role but providing the population with more knowledge will most probably not result in action as the compartments of “knowledge”, “motivation”, “spirit”, “sensitivity” and “action” are seriously disconnected. It is above all necessary to work towards reconnecting that what has been fragmented and disconnected.

The issue of passivity and conformism is not really recent as it has been a concern for many social scientists, artists and philosophers during the entire previous century. Many of them come from Germany and responded to what they saw happening during the Second World War. Hannah Arendt argued throughout the whole of her work that it is passivity that we need to stand up against. In her famous book ‘The Human Condition’ (that she originally wanted to give the title “Vida Activa”) she introduced the concept of ‘the space of appearance’ as a public space that allows opinions to be seen and heard, and where “action” takes place against mere functionalism and conformism [9]. Herbert Marcuse introduced his concept of the One-Dimensional Man who is totally encaptured in a prevailing system of production, consumption and thought maintained through mass media and advertisement [10]. Jürgen Habermas, reflecting on basically the same phenomenon, called attention for the public sphere as a true place for dialogue between diverging opinions and convictions [11]. They all raised the issue of passivity and lack of participation, seeing that as a major threat for a democratic and humanist society. More recently, Zygmunt Bauman’s analysis of contemporary society goes a step further where

he mentions that neoliberal economics seriously hollowed the very concept of “society”, the “social” or the “public”. Dialogue and participation are declared to be largely futile as means to contribute to a better world. Consumption is the buzzword, both for developing society (read: economy) as for becoming ‘happy’ on a merely individual basis [12].

Many of the above-mentioned scholars maintained a clear distinction between the public and the private, with Hannah Arendt being very outspoken in this respect. For her, the personal was not political as she expressed on many occasions, a view that took an interesting turn when she invented the concept of the Banality of Evil [13]. Arendt created this concept when she was following the Eichmann trials in Israel in 1961, in response to the way she perceived Eichmann during his trial. She was struck by the huge discrepancy she encountered between the man and his deeds. Eichmann was a grey bureaucrat that did not show any ideological inspiration or fanaticism but nevertheless was one of the biggest committers of horrible crimes against humanity in history. He committed these crimes in a sort of bureaucratic routinized – banal – way, apparently disconnected from any emotion or inner motivation. Arendt accused Eichmann that he did not think and that his contemplative life was disconnected from his active life. She pointed at a crucial issue even though she did not conceptualize that as I do now: the inner fragmentation and disconnection between thought, emotions and actions that allows people to, on the one hand, commit horrible deeds as acts of routine without feeling emotions and, on the other hand, to remain inactive and passive while horrible deeds or life-threatening changes are unfolding.

The Armenian philosopher and writer George Gurdjieff and the German artist Joseph Beuys explicitly did link the public and the political to the personal and the inner self. Gurdjieff lived through World War One while Beuys served as a soldier in World

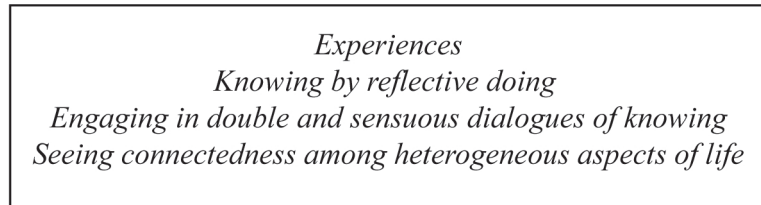


Figure 4: Some characteristics of experiential knowing.

War Two. They both reflected a lot on apathy and lack of resistance, reflections that lead Gurdjieff to talk about people as automatons in a state of a “hypnotic waking sleep”, using only a small part of their potential while being susceptible to all sorts of control from outside [14]. Both explained apathy and lack of self-awareness as the result of a misbalance in and fragmentation of the rational, the emotional, the corporal and the spiritual. Beuys analyzed this as a feature of modern society with its rather one-sided attention to rationality, at the expense of the emotional that he regarded as the major source of energy and creativity [15]. He suggested that we rediscover the artist in ourselves meaning that we reconnect our emotions, our thinking and our spirituality that he saw as a resort of invisible energies. Gurdjieff focused more in particular on the mismatch between the body, the mind and emotions and developed a set of methods and exercises to stimulate a balanced awakening of these three elements. His methods include physical exercises, music, movements, sacred dances, writings and various types of group work. Both aimed at restoring an inner balance to prevent the occurrence of that what Hannah Arendt labeled as the banality of evil. There are many links between their thinking, Nicolescu’s transdisciplinarity and the way I look at transdisciplinary hermeneutics as creating ecologies of knowing.

4 Building Blocks for a Transdisciplinary Hermeneutics

In 2012 Nicolescu wrote that to erase the fragmentation of knowledge, and therefore the fragmentation of the human being, we badly need a transdisciplinary hermeneutics. “This is a really big question”, he added [16]. On a number of other moments, like in his Manifest of Transdisciplinarity, he introduces the figure of the “Homo sui Transcendentalis” who is capable of acquiring knowledge through the intercon-

nections of all of reality. The “Homo sui transcendentalis” works with both that what is seen, observed and measured as well as with that what is unseen. He tries to capture the unseen “using a language of the imaginary thus trying to penetrate higher levels of Reality - parables, symbols, myths, legends, revelation” [17]. More in particular, Nicolescu thinks in terms of acquiring three distinct types of meaning:

1. Horizontal meaning that is acquired through interconnections at one single level of reality, the domain of most academic disciplines,
2. Vertical meaning that is acquired through interconnecting several levels of Reality, the domain of poetry, art or quantum physics, and
3. Meaning of meaning, acquired through the interconnections of all of reality, the Subject, the Object and the Hidden Third

When subsequently exploring some possible starting points or building blocks for a transdisciplinary hermeneutics, Nicolescu mentioned various concepts like the concept of the semiosphere or the ternary structure of Reality as set out by Charles Sanders Peirce [18].

The concept of ecology of knowing that I like to present here is different from what Nicolescu proposed, even though there are similarities. My starting point is the distinction between three rather archetypical forms of knowing: formal (see Figure 5), experiential (see Figure 4) and direct knowing, complemented with a fourth category of integrated knowing through ecologies of knowing where each form nourishes the other thus creating rich and diverse ecosystems of knowing. Seeing knowledge in the order of 1) formal, 2) experiential, 3) direct and 4) integrated knowing however is based on a rather traditional view where formal knowledge is mentioned first thus - implicitly - indicating that it is the first and foremost form of knowing. It is

Codified knowledge
Formal ways of knowing
Engaging in theory based research
Understanding based on analysis, logic and reasoning

Figure 5: Some characteristics of formal ways of knowing.

important to take distance from that assumption as the first and foremost form of knowing rather is experiential knowing. This form has many characteristics to be called the “mother of all knowing”.

Experiential knowing is the natural process we all go through and can be characterized in the elegant words of Mary Catherine Bateson as “meandering” and “moving along the way” [19]. It is learning by doing, exploring, touching and moving things, taking them apart, twisting and bending them discovering that we sometimes can and sometimes cannot repair them. It is reflective in the sense that it is rooted in action while our actions inform us on the world around us, in a constant process of action-reflection-action. It is not only the natural form of knowing – and learning – but is equally the most essential one in the context of the main theme of this article: connecting with our inner self and overarching internal and external fragmentation. Learning from experiences has the great virtue that it allows us to see connections and connectivity between heterogeneous elements that we encounter along our way. Yi Fu Tuan [20] defined experience as the “cover-all term for the various modes through which a person knows and constructs a reality” and Gregory Bateson indicated that experiences have the potential to integrate “hard” and “soft” data present in any situation [21]. It is exactly this potential of constructing an integrated understanding of a complex – multileveled – reality that experiential knowing offers us, as it combines various ways of relating us with the world such as the mindful, the sensory, the embodied and the emotional.

Where analytical knowing takes the world apart and runs the risk of leaving us behind with a fragmented understanding of the world, experiential knowing integrates and has the potential to create integrated understanding. The way Argyris and Schön [22] explain in more detail how this process takes shape, revolving around the concepts of “dialogue”

and “mental map”, is very illustrative. Experiential knowing is like engaging in a double dialogue, they say, one with the situation in front of us and one with our inner self, in particular with our inner mental map. Such a map is a storage place of all our previous life experiences in the form of a variety of images and descriptions, of experiences, formal knowledge, emotions, tacit knowledge and more. Engaging in a dialogue means seeing the world in its full complexity and comparing what we see in front of us with all that we have stored inside of us. It is seeing the situation as both similar and different from previous situations (we compare, associate) and in this way we organically link formal knowledge (where am I now/was I before; names, places, dates etc.) with emotions (how do I feel now/did I feel then), our senses (how did it/does it look like, smell and sound), embodied knowledge (what was I doing then/what am I doing now), with values (how did I evaluate what happened, what was right and wrong/how do I see the current situation in this respect) and with our own actions and role in what happened/happens [23].

Engaging in a double dialogue is highly sensitive as well as sensuous and allows us to integrate in natural ways colors, forms, texture, sound, temperature and smell. Engaging in dialogue allows us to dance with the world and to tune in with its rime and movements. It offers us the ability to see reality in polyphonic ways [24], and to seek dance partners with whom we can be co-creators of present movements and emergent futures, thus realizing presencing and anticipative Not-Yet consciousness. The notion of the surrounding as an intrinsically dynamic, ever changing, complex and systemic entity is very crucial. We still too often think in a world that is fixed and in ourselves as the change agents creating the movement. Yet such a fixed and immobilized world does not exist. Any community, group, organization or ecology is in constant movement and when

we want to bend the movement in a certain direction we should tune in and influence from within working with the system dynamics that are always present. It really is about feeling the movement and tuning in with that movement.

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The capacity to learn from experience has everything to do with the ability to see and feel connections between various life experiences as well as with corporal experiences. It is a natural process but many of us unlearned it – to a certain extent, one more than the other - due to the education we received as children. We all remember that we, as children, learned by exploring (playing) and by taking things apart, until we entered the primary school where many of us needed to sit down quietly, without moving, talking and playing. Learning converted in a merely cognitive process of thinking, analyzing and comprehending by means of storing the content of books in our memories. The ideas of people like Rudolf Steiner, Maria Montessori and Paolo Freire - for primary, secondary and informal education - and David Kolb - for university education - are widely recognized and have influenced all forms of education. Nevertheless, the emphasis in many schools still is on formal knowledge and related skills (skills to search, present and communicate the knowledge for instance) instead of teaching the children how to enter in a double dialogue of knowing [25]. This is not only true for primary education but exists all the way up to higher education [26-27].

Being able to enter in a dialogical process of knowing – and therefore in transdisciplinary hermeneutics

- involves a form of re-learning that in essence is a process of learning to open ourselves to that what the world has to tell us. Hans-Georg Gadamer [28] formulated this in words that I took from a text made by John van Breda. “We understand the world”, Gadamer says, “through a process of dialogue where we - subjects - engage in ‘listening’ and ‘hearing’, thus opening for what the object has ‘to say’. In other words, the subject allows the object to disclose itself and to be named in a certain way, but only to the extent that the subject is capable of ‘hearing’ what the object brings to the surface” [29]. Gadamer used the term “horizon of meaning” as the complex of our own assumptions and presuppositions that works as a filter in our dialogical understanding of the world, a term that has some relationship with the concept of the mental map. Gadamer added that (re)-learning to open ourselves involves listening to what is said but simultaneously involves listening to what is not said as this informs us on our ‘horizon of meaning’ and its inevitable limitations. Engaging in dialogue therefore opens the door to the widening of our horizon of meaning once we, again, open our inner self.

Experiential knowing equally offers all the possibilities to see and understand the world and ourselves within that world in polyphonic, symbolic, artful and imaginative ways. The narrative or novel is a perfect way to build upon experience in polyphonic and symbolic ways, leaving as many interpretations open as possible. Schön [30] challenges us to engage in dialogue using metaphors, as the metaphor allows us to see various characteristics of a reality each time we develop a new one. Eve Mosher’s ‘HighWaterLine’ makes us “see” a future just by creating a simple line, touching upon our capacities of visualization and imagination. Eve invites us to enter in dialogue with a Not-Yet future by means of comparing the now with that what may become. This again brings us back to Scharmer’s presencing and to Bloch who talked about the appeal of dressing-up and the world of fairytales and the dream-factory. And it brings us back to Nicolescu mentioning the human capacity to see multiple possible worlds, in the here and now as well as in the future. Experiential knowing and engaging in a double and sensuous dialogue is immensely important as a way of seeing, imagining and feeling connectedness between heterogeneous aspects of life in the present as well as in connecting that present with both the past and the future. It

Revelations, in-sights
Direct knowing from within
Engaging in clearing the mind and opening the heart
Insight based on intuition, abduction and sensitivity

Figure 6: Some characteristics of direct knowing.

is our natural way of knowing and learning that we have unlearned and therefore need to relearn as it is the basis of transdisciplinary hermeneutics.

It would however be incorrect to reduce transdisciplinary hermeneutics to experiential knowing, as there exists an ever-growing body of very relevant knowing in between and beyond our direct experiences. I obviously refer to formal or 'codified' knowledge found in books, articles, documents and databases. It is knowledge in the form of what Bertrand Russell labeled "knowledge by description" [31]. It is indirect and mediated by concepts and theories, created in cognitive thinking processes using above all (yet not exclusively) analytical intelligence and logical reasoning. It is comparable to Nicolae's first type of meaning creation: meaning acquired through interconnections at one single level of reality, the domain of most academic disciplines. I will not go into detail in this form of knowing as it is well known. Yet what I do want to emphasize is its huge potential in both a positive as well as in a negative sense. In a positive sense scientific, disciplinary or formal knowledge has the capacity to open many new horizons and to find solutions for a multitude of serious problems. Thanks to science the cause of and the solution for the plague was found, a disease that killed 75 to 200 million Europeans in between 1346 and 1453. Thanks to acquiring formal knowledge and related skills as reading and writing, all of us have the capacity to extend our intellectual horizon in incredible ways. The scientific worldview is a liberating worldview in as far as it challenges us to doubt any dogma or doctrine and invites us to explore their value and truth in independent ways, not hindered, restricted or conditioned by any repressive civil or religious authority.

Yet science also brought us the nuclear bomb and climate change, the horrors of the Second World War and multiple other wars, banal evil, colonization and the repression and marginalization of virtually all

societies and civilizations outside of Europe, simply because they were based on other-than scientific and Western principles. This shows once more the huge power and potential of science, albeit in a negative way. The obvious answer to these negative impacts is not to abandon science but to contextualize it and to integrate it in cultural, political and social frameworks thus allowing the rational to be connected with the emotional, the corporal and the spiritual. Scientific and formal knowledge can be a master servant in the understanding of the world, but should not be the leading agent. I am using these particular words thinking in Einstein who allegedly once said that: "The intuitive and metaphorical mind is a sacred gift and the rational mind is a faithful servant. It is paradoxical that in modern life we have begun to worship the servant and defile the divine." Whether or not Einstein really provided this quote, it goes right back to the issue of the banality of evil as the consequence of not linking and integrating the cognitive with the inner self thus allowing the most horrible acts of destruction to happen. Science is immensely important but must be contextualized and integrated with our inner self, culture, moral and other forms of knowing such as experiential and direct knowing (see Figure 6).

Ecologies of knowing should also include direct knowing, seen as a form of knowing that cannot be understood in terms of the mind or incorporated intelligence as accumulated experience over time. Direct knowing presents itself "just like that", in "a flash" and is not based on conscientious and deliberate processes of thinking, calculating, comparing or describing. By contrast, direct knowing often takes place in moments when we deliberately try "not to think" and clear our minds. It is in such moments that we receive insights, revelations or illuminations. It is the result of a process that is the opposite of knowledge through conscientious processes of thinking.

Insights that presents themselves in moments of “flashes” easily convert into convictions that are of paramount importance for the person involved. William James described them as: “...states of insight into depths of truth unplumbed by the discursive intellect. They are illuminations, revelations, full of significance and importance, all inarticulate though they remain; and as a rule they carry with them a curious sense of authority” [32]. Direct knowing is based on the most explicit way of linking with our inner world, a world that some describe as our very essence, our soul or spirit. The key is openness and opening ourselves that we could describe as follows: when we open the door of our heart, we allow the outside world to come in. And when we do open ourselves, and let the world come in, insight may manifest itself in various spheres of reality, from the very practical via the aesthetic to the very spiritual.

Intuitive knowing is maybe the best-known form of direct knowing and often is very practical. At a certain point we “just know” and we say that it is our intuition that informs us. In various disciplines, such as economics or business administration, the importance of intuitive and direct knowing is widely recognized. Herbert Simon, who received a Nobel Prize in economics for his work on bounded rationality, paid extensive attention to the importance of intuition in decision-making, and developed a line of research on the use of intuition and heuristics that is very relevant until today [33]. Daniel Kahneman, a psychologist by training and equally a Nobel Laureate in economics, devoted his academic career to the difference between on the one hand intuitive and emotional thinking (that he calls fast thinking), and on the other hand deliberative and logical thinking (slow thinking) [34]. Kahneman analyzed the kind of mistakes we make in either form of knowing thus problematizing the commonly held opinion that intuitive knowing is as a rule less reliable than formal knowledge. He explains how evasive intuitive thinking is and shows the importance of being aware of the great impact of intuition on our behavior in all kinds of professional settings. Because of that, it is important to teach how to be aware and use direct knowing like intuition in all spheres of life, including professional life. This means training our sensitivity to the outside world through a variety of training methods that may include the ones Gurdjieff proposed, and practices such as meditation, yoga or martial arts. This equally may include various artis-

tic activities like creative writing, painting, dancing or acting, or mere physical activities as walking, hiking or running. They all have the potential to make us (re)-discover ourselves and to (re)-connect our body, mind and emotions.

Direct knowing allows us to “see” things yet not with our eyes but with our heart or soul. The Little Prince explains well what this means in the novella named after him, written by the French writer and poet Antoine de Saint-Exupéry: “one does not see unless it is with the heart; what is essential is invisible for the eyes” [35]. Abduction is such a way of seeing and is, as a search strategy that enables us to match patterns, first coined in the beginning of the 20th century by Charles Sanders Peirce [36]. Abduction makes us see connectedness in and among complex systems that is not detectable in merely logical ways. In the words of Peirce: “the abductive suggestion comes to us like a flash. It is an act of insight” [37]. Later, Gregory Bateson used it as a metaphor to see essential patterns or meta-patterns that connect across different species or cultures. It is seeing the connectedness that marks the essence of a system or of its thresholds [38]. Sacha Kagan applied this idea of seeing the essence of a system to ecology and sustainability, connecting sustainability with art and aesthetics as forms or practices of sensibility that allow us to see both the un-sustainable and potentially sustainable patterns in our societies [39]. Interviewed by Raffaele Cascone³, Nora Bateson, daughter of Gregory Bateson, gave the following example to explain this form of seeing. She showed her hand and asked: “what do we see?” Most people answer describing the parts of the hand like the fingers. Nora responded explaining that an essential part of the human hand is not the fingers but the open spaces in between the fingers. Without those open spaces our hands would be like the feet of a duck. The essential characteristic of our hands (and those of primates) is the space-in-between, a space that we easily overlook with our eyes. In the same interview Nora made a reference to her sister Mary Catherine who once asked: “how can we care for nature when we do not see the essential connectedness we have with nature?” And indeed, many of us lost the capacity to see this essential connectedness.

Others see the spiritual level of Reality as a world of powers, flows of energy or consciousness that is

³<http://www.youtube.com/watch?v=KTsGtTeVEAI> (last visited, 28-10-2014)

invisible for the eye but accessible through direct knowing, especially when stimulated and provoked in rituals, ceremonies or meetings that are meant to open our spirit or soul. Joseph Beuys was very interested in the invisible flows of energy and included shamanic practices in his art with the intention to be connected with these flows [40]. In many – if not most or all - non-Western cultures, the existence of such powers is a totally accepted part of reality. There is a growing tendency to re-valuate such cultures and to create ecologies of knowledges that integrate Western and non-Western ways of knowing as equal and complementary epistemologies [41]. Transdisciplinary hermeneutics is a very interesting and promising hermeneutics for uniting such diverse epistemologies from both the north and the south, in heterogeneous ecologies of knowledges [42].

5 Transdisciplinary Hermeneutics, Ecologies of Knowing and Spaces of Imagination and Experimentation

I look at transdisciplinary hermeneutics as a dialogue or dance with Reality, connecting us with both our inner self as with the outside world, tuning in and listening to how we allow the world to disclose itself. It involves moments of reflecting and consulting our mental map or horizon of meaning, moments of analyzing and trying to comprehend that what the world unfolds, and it involves moments of sensing and being sensitive to that what the eye cannot see in the world, situation or Reality with which we are in dialogue. In terms of the three categories of meaning that Nicolescu distinguishes, I included in my presentation so far the two first categories of horizontal and vertical meaning. It is obvious that transdisciplinary hermeneutics as described here has many possibilities to create as well meaning of meaning but it is important to be precise in indicating what that means.

Meaning of meaning is acquired through the interconnections of all of Reality, the Subject, the Object and the Hidden Third, while Nicolescu describes the last as a connection term or a flow of consciousness that coherently cuts across different levels of Reality of the Subject and that must correspond to the flow of information coherently cutting across different levels of Reality of the Object. In describing what

the Hidden Third is, Nicolescu makes a clear distinction between knowing in the zone of resistance and knowing in the “zone of non-resistance” [43]. The first happens when we put our ideas and theories to the test of reality, when we enter in a dialogue and when reality talks back and discloses itself (which is precisely the meaning of resistance). But when we create meaning in between and beyond various levels of a discontinuous Reality we enter in zones where Reality cannot talk back. It creates knowledge beyond the single levels of Reality as in a hermeneutical circle where the essence of knowing lies in the apprehension beyond the knowledge of the parts. I see the essence of “meaning of meaning” exactly there, in the zone beyond knowledge of the parts yet by means of interconnecting all the parts. Meaning of meaning or transdisciplinary understanding is an emerging property of the activity of engaging in transdisciplinary hermeneutics as a systemic activity including heterogeneous forms of knowing on various levels of Reality, and cannot be reduced to knowledge of the parts.

The essence of ecologies of knowing is that they are systems with their own system elements – experiential, formal and direct knowing – but on top of that with their emerging properties -integrated knowing – with all possible feedback and feed-forward loops between the various elements. It is in this sense that I mentioned ecologies of knowing in which each type of knowing nourishes the other thus creating a rich and diverse environment. Transdisciplinary hermeneutics is not the sum of experiential, formal and direct knowing but is a multiplier creating something beyond the three forms of knowing, beyond levels of Reality. It is in the “beyond” where meaning of meaning can be found and we need to create complex systems in order to be able to allow such emerging – beyond - properties to manifest themselves. That is why the rational, the emotional, the corporal and the spiritual need to be united in a complex system, ecosystem or ecology of knowing.

The final question that I will only briefly touch upon here is how to practice transdisciplinary hermeneutics. In various publications I have proposed to work in so-called “spaces of imagination and experimentation” and indeed such spaces are the perfect platforms to engage in transdisciplinary hermeneutics [44]. They invite to approach a problem not only in cognitive or analytical ways but invite to explore the problem and its context in mul-

tiple and complementary ways: through analysis, reflection, imagination, visualization, association, dialogue of knowing among participants involves and introspection; imagining solutions and test them in experimental ways transcending existing boundaries [45]. As Sacha Kagan and Julia Hahn observed in this respect, creativity is something that emerges out of “unplanned, undirected, non-designed creation and experimentation of new social forms” [46]. Because of that it is essential that the spaces invite to transcend boundaries and to experience puzzlement, surprise and confusion. This provokes the multiple feedback and feed-forward loops and the mutual nourishment just mentioned and creates the emerging properties, of which creativity, energy and motivation are key ones.

6 Concluding Observations

The title of this article is “Transdisciplinary hermeneutics; working from the inner self, creating ecologies of knowing”. The article proposes a certain practice of transdisciplinary hermeneutics that indeed is based on working from the inner self, integrating rationality, emotions, the corporal and the spiritual. It offers the possibility to eliminate some of the important causes for social inertia, more in particular the fragmentation of the human being and the loss of connectedness with our inner self.

The grass in the Amsterdam football stadium is not growing because it receives, next to water and light, also air, CO₂, temperature and nourishment. It grows because these elements together create emerging properties (“conditions”) that allow the grass to grow from inside. We cannot change social inertia vis-à-vis climate change

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