UNIVERSITY OF TAMPERE
Department of Social Research

Sociology of Integral Knowledge

The Incommensurable Life-worlds of Material and Integral Science

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ABSTRACT

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The author applies a non-structured phenomenological approach to observe two central currents of experiencing reality scientifically. Integral science and the conjoined integral experience refer to a modern tradition of combining science and universal spirituality. The author compares this integral experience with the predominate experience stimulated and supported by material science, describing both realities as they appear from within the experiencing subject.

Main objectives of the thesis are threefold: discussing epistemological issues of sociology, introducing the realm of integral experience, and investigating the split of material and integral experience and its relevance in modern history of knowledge.

Keywords: sociology, integral, experience, phenomenology, science studies, life-world, history of knowledge, paradigm, paradigm shift, metaparadigm, materialism, integral science, sociology of knowledge, scientific revolution, spirituality, metaphysics, scientia mensura, teodichea, coherence, Akashic Field, non-locality, universal, objectivity, epistemology, reality, reality-experience, Darwinism, evolution, medicine, religion, Christianity, sankhya, morality, science and spirituality, perennial philosophy, kriya yoga

Contents

Introduction

This thesis belongs essentially to the tradition of historical sociology even if there are affiliations with phenomenology, sociology of knowledge, science studies, macro-sociology and general theory of science. For the author historical sociology means embarking on a journey across the labyrinthine abstractions of living human reality to find some enlightenment on a certain issue.

The approach is one emphasizing the understanding of larger historical processes at the expense of seeking full clarity in smaller details. Prospectively, the experienced realities of material scientists and of integral thinkers could and should be studied with empirical tools of social research. The present approach aids in this project by offering imagery of the complete landscape too fuzzy for the grasp of objective methodologies. A deeper discussion on the phenomenological approach is presented in chapter one.

The election of integral science as a target and phenomenological approach as a method of study represent a conscious desire to deal simultaneously with some of the most fundamental issues of science and human experience. Some might say such an avenue is insecure or even dangerous. The author however argues that this can be done, and that this is a vital ingredient in the overall development of science regardless of the failures and successes of this particular thesis. Integral science presented in chapter two manifests a possibility of striking revolution in scientific thinking. Central categories and issues are by definition exposed in such a development.

In chapters three and four a comparison is presented between what material science means for experiencing subjects and how integral science differs from that. Themes such as social systems, morality, medicine and cosmology are analyzed within the frameworks of both life-worlds. The goal is to reveal as deeply as possible the delicate core certainties held by supporters of both communities. The conclusion is a testimony of the challenges of modern knowledge in times of exceptional uncertainty and accelerating change.

Chapter 1: Universal Science and Ultimate Knowing

"Only that which flows directly from the self-evidence of the living person carries with it the inner sense of absolute certainty"[*].

"[E]xperience and knowledge are one process, rather than to think that our knowledge is *about* some sort of separate experience."[†]

1.1 Ultimate knowledge

In the beginning of the modern quest for knowledge contemplative metaphysics was the queen of sciences. Other disciplines and empirical sciences served loyally delivering insights and sterile facts to the altar of focused minds to untangle. Following Edmund Husserl[‡] here we affirm that regardless of deviations this has always been so. Mankind seeks answers to the deepest mysteries of life not out of curiosity but to reveal the core workings of reality. There is no research that can be separated from this essential project. Recent expansion and fragmentation of knowledge have hidden from many this elemental observation. All modes of scientific research and knowing are – no matter how loudly postulating epistemic neutrality – servants of a particular tradition in the grand metaphysical quest.

Our goal here is to dissect two of the main alternatives offered. First we need to discuss how to approach the field of scientific realities in order to avoid both frivolity and endless technical discussions. We apply here the method of *essential seeing* deriving from the phenomenological tradition of human research.

Principally, phenomenology maintains that human experience is the foundation of truth and knowledge like proclaimed in the opening quotation. Phenomenological reduction signifies, like the original objective of Descartes, an effort to rid this elementary device of knowledge from all (or most of) prior standpoints arising from socially conditioned categories and to perceive phenomena directly[§]. Such an approach does not negate empiricism but instead affirms that whatever results

[*] Ferguson 2006, 44
[†] Bohm 1980, 7
[‡] Husserl 1954, 7-9
[§] Ferguson 2001, 238-9; 2006 47-49

any empirical or mathematical procedures offer fundamentally they are evaluated within the contemplative mind[*].

Consequently any general system claiming to explain how the world (or a part of it) works – be it scientific, political, metaphysical or spiritual – receives its validity from the inner life-world of individuals and groups who apply that particular worldview in their everyday thinking and acting. Science does not prove itself. Science is but a procedure. Instead it is people who prove onto themselves – with or without the help of *some* science – one constituent mode of experiencing all of reality.

Human sciences generally approve that any pure positivist approach resting on immediate empirical perception does not endure[†]. Regardless of this, the perception of truth as perforce relative to the experiencer is dismissed in much of contemporary philosophy as subjectivism, relativism or nihilism. This is not a postmodern issue but a challenge shadowing the entire history of social theory[‡] – and philosophy and science in general. Phenomenology has distinct advantages in the face of this concern as argued below.

The triple realization of experiential truth is essential for pure phenomenology and also for sociology of knowledge presented below. The realization suggests firstly that (scientific) knowledge is historically relative, secondly that its core assumptions are confirmed not by itself but by people for themselves. Thirdly follows that our very own perception of reality is most definitely conditioned by the mode of our epistemic searchlight. Briefly this means that *the experience of the scientifically predisposed mind is the ultimate measuring device*.

Historical relativity of knowledge

This argument suggests that the Enlightenment dream of scientific truth resting on purely objective grounds may sooner or later prove to be a mirage. Indeed while our understanding of reality has expanded we have begun to realize there is no definite way to reduce reality into opinion-free components and distinctions[§]. Instead as our scientific dispute hints we may witness a return to the protagoran notion of human as the measure of all. Science is theory-laden and our ability to

[*] Husserl 1954, 48-53
[†] Raunio 1999, 132
[‡] Crook 2001, 313
[§] Peat 2007, 927-8. Quantum mechanics is the standard example of the limits of objectivity.

formulate theories depends on our prior understanding. Our epistemic searchlight zooms principally upon those domains of experienced reality held imperative by previous science. There is always a possibility that our knowing be fundamentally updated. Science builds on the acknowledgement of this possibility.

Like the individual who can never be sure should a later revelation one day throw completely new light on everything he has so far believed in; so even the overall paradigm of (natural) science has – ideally – a built-in feature to reassess its position should new evidence reveal distortions in its perception of reality. According to phenomenology this attitude is not scepticism but lucid scientific protocol. As long as the prevailing theory of science has not attained bullet-proof evidence regarding its underlying assumptions we should stay cautious. Major disclosures may still be awaiting us.

1.2 The sociology of knowledge

According to Karl Mannheim sociology of knowledge seeks to grasp in their totality all epistemic (ideological) currents effective in a given society without entangling itself with any of these. Doing this the observer sees clearly the complete picture while those involved in any of the ideologies have a limited viewpoint.[*] Finding a non-conditioned bird's-eye perspective on human reality as required by Mannheim's thesis seems very difficult indeed. Evidently Mannheim felt little need to include the supremacy of natural science in his sociology of knowledge. Likewise empirical sociology of knowledge of our day leans mostly on structured methods of analysis mimicking the operations of natural sciences and applies no distancing from the mother-ship of materialism.

Opposing such loyalty both Mannheim and Husserl seem to share a conviction that the researcher observing beings and becomings of human reality finds most illumination not by accepting rigorous procedures but by removing all mental concepts of rigor and protocol *first*. So to grasp the turbulent history of human knowing and experiencing – in which we are personally embedded – we must learn to *see* directly into phenomena, constantly introspect on our ways of seeing and refuse to accept pre-given distinctions; unless of course we *see* them.

[*] Kettler & Meja 2001, 104

Along with phenomenology another description for such an intellectual assignment is *metatheorizing* which does not mean plain research reviewing but promotes a "normative endeavour aiming to make sense of and give directions to first order studies."[*] This permits us to distance ourselves from the manifold philosophical discussions of scientific epistemology and deliver phenomenological insights into the currents of scientific realities. This means co-operation, not denying the importance of philosophy.

Often scientific problems are solved not by dwelling on them and dissecting deeper but by distancing, zooming out or letting go. The strong programme of sociology of knowledge espoused by David Bloor also familiarizes with our approach. Bloor's strong programme wants to take the scientific attitude all the way by studying science itself with scientific neutrality[†]. The difference is that Bloor and his associates tend to study science at a more empirical level than pure phenomenology. Therefore they too easily leave aside the deep metaphysical questioning necessary for metaparadigm research.

To take a step towards practice: Studying scientific paradigms phenomenologically signifies a distancing from accepted truths, introspection and a rigorous scepticism. A neutral witness sees the dominant scientific world view merely as an alternative mode of classifying and interpreting phenomena arising within the experiences of people. Individuals apply any mode some staying with it; others move on to combine and experience a variety of other modes in order to quench the thirst for inner wholeness and realization.

In this view a serious student of science should have no original preference as to which of the modes of experience offered by his own community – or perhaps some foreign epistemology – will prevail if any. Or put differently there should be no prejudices in the ultimate quest trying to ascertain which of the various metaphysical life-worlds induces the highest coherence upon the true apparatus of scientific certainty – our private inner experience.

To be sociologists of knowledge we should therefore experiment with the different modalities of reality-experience. In order to truly understand the epistemic and metaphysical currents of any age the science researcher should not suffice to read about them or just to observe them. Also dangerous is to initially dissect observed systems of knowledge into dimensions or categories such as

[*] Zhao 2001, 387
[†] Kiikeri & Ylikoski 2004, 137-41

ideological, metaphysical, epistemological etc. This is because we have no universally legitimate mode of such categorizing and we tend to forget that many powerful currents of experience incorporate many if not most of these dimensions. We can observe a variety of in-themselves complete currents of knowledge which can be termed ideological, epistemological, or metaphysical – or something else.*

The risk is this: deciding at the outset that some of these currents are dead-ends and other more vigorous without first experimentally sympathizing with their philosophical and experiential suggestions (while listening keenly and patiently to their followers) leads to a severe risk of excluding from our intellectual life the lines of thought with future potentiality. To illustrate: one cannot know the taste of sugar by listening to descriptions of it or by studying its chemical architecture. Nor can one know *for sure* if milk can be churned into butter or oil pressed out of an olive even if someone claims so. One needs to taste the thing and to witness first-hand experiments in order to reach full certainty.

Calm inner observation *and* participation with substantial metaphysical candidates accompanied by actual (oft unpleasant) letting go of socially induced beliefs and behaviour is absolutely necessary. This is the only objective method of answering the most compelling scientific questions, that is: what will be considered scientific in the future and which mode of experience has the highest experiential coherence. Ideally these two should bring similar results.

Phenomenology argues that such an approach is far from anti-empiricism. Empiricism in the phenomenological approach for science studies means just this for a student who has understood the message of history of knowledge: we must study ourselves as we approach different universes of metaphysical experience available. We cannot know from a distance which one has the highest clarity. If we routinely inhabit a particular metaphysical system with its social, psychological, epistemological, symbolic and experiential contents but refuse to step out through the magnetic membrane and visit other worlds, how can we be sure we are not simply wrong?

Here we come across with a risk that a gap forms between those engaged in continuous empirical research of human affairs and those with a more contemplative approach such as this one. Routine researchers are concerned with methodological questions but may have limited interest to reflect

* Here we intentionally apply several of these core terms intermixed to keep in mind the completeness of alternative world-experiences.

upon these background philosophical issues[*]. The risk is real but gives no mandate to inhibit the approach. Everyone is responsible for his own co-operation only.

So let us be scientists by listening more and talking less.

1.3 Incommensurability and prevailing metaphysics of objectivism

Before making way for the integral experience we give an opening account of the epistemology of the mother-paradigm for which the new approach seeks to offer major update and departure. This is our commonly accepted mind-universe of scientific materialism. Historically the new metaparadigm of science emerges in relation to the one it seeks to correct and expand.

The reason we deliver the issue at the scene now is that sociology of knowledge encounters epistemological challenges such like the arduous paradox of incommensurability historically present throughout any study with similar objectives: From the perspective of any paradigm the alternative seems confusing or even irrational; from the perspective of the new paradigm the old one seems limited and superficial. In other words the supporters of a new solution experience a qualitatively different reality than the representatives of the dominant reality. There is a gap of both epistemological and experiential disorientation – like a strong magnetic field – separating the two life-worlds.

This does not mean arguing that all special paradigms or even grand scientific metaparadigms are absolutely isolated as scientific theories. Such position leads to difficult theoretical issues since not everything changes while new core understanding unfolds[†]. Debate on the Kuhnian notions has not settled and here we leave it aside. Instead we merely imply a phenomenological incommensurability of scientific metaparadigms. That is: there exists (at least two) widely supported frames of experience that lead scientists to assemble scientific theories in distinct mutually excluding ways.

Apparently we are walking on razor's edge: How to situate our approach while studying a scientific revolution in which we are also included. If sociology stays safely grounded in the mother-paradigm then no experientially valid knowledge of the new paradigm is possible. Or if we are too enthusiastic about new frontiers we lose our discrimination and scientific caution. No methodical

[*] Luoma 2008, 68
[†] Bar-am 2003, 112-3

solution insures us against this threat. We must stay with the phenomenological approach and keep moving.

Another question concerns the reality of the metaparadigms themselves. Do we really have uniform materialist or integralist life-worlds? It is possible to argue that empirically so many variations of these experiences exist in individuals that speaking of such ideal types has no validity.

However observations deriving from several branches of scientific research as suggested by scholars like Paul Ray[*], Mark Woodhouse[†], Peter Russell[‡], Basarab Nicolescu[§], Christian de Quincey[**], Freya Mathews[††] and Ervin Laszlo all share a comparable image of two supreme scientific metaparadigms – supporting the main argument of this thesis.

Deconstructing the ideology of objectivity

Now we will briefly describe the epistemological standpoint of modern science and how the phenomenological approach deals with it.

To begin with we restate the claim that the principal enigma(s) of existence are far from being unravelled by our dominant paradigm – neither by modern natural science nor the manifold philosophical currents swirling around and embedded within it. Modern science does offer one solution to the metaphysical quest but not everyone is impressed by it. This is sociological realism. Phenomenological reduction reveals that at present scientific materialism is socially pre-eminent and therefore we can expect to witness dogmatism around it. Yet it merely portrays – like integral theory, biblical creationism or any other major metaphysics – one way of approaching the mysteries of existence.

The apparatus of modern science is high-wired with the ideology of objectivity. Our natural science insists that ultimate knowledge be such that it is transferred via formulae and not by people. Science asserts a great level of advancement in this preceding manner. Material science claims to have (nearly) permanently cleared out wishful, subjective and magical thinking from its ensemble –

[*] Ray 1996, 1997
[†] Woodhouse 1996, 6-40
[‡] Russell 2002
[§] Nicolescu 2002, 9-22
[**] de Quincey 2005, 51-75
[††] Mathews 2003, 25-44

thereafter leaving the arena of scientific endeavour free to explore the cosmos without the degrading effect of ideologies or religious beliefs. Without doubt materialism offers precise data and descriptions about the *cosmos without the perceiver*; without the experiencing subject.

The division between hard (natural) and soft (human) sciences manifests the nexus of the objectivity theorem: real knowledge starts where human affairs end. Consequently any approach like phenomenological reduction becomes easily stripped from scientific validity. Here the opposite is repeatedly affirmed: real knowledge begins where human beings start to investigate their own knowing. So while prescribing the phenomenologically loaded sociology of knowledge we swim against the legitimate stream emphasizing objectivity.

This standpoint does not suggest anti-scientism, subjectivism nor relativism. A reality so beautifully organized has to be governed by a set of simple and elegant natural laws beyond human opinion: this root of positivism is compatible with phenomenology. But the one who can *know* these laws is a human being, not a man-made science-machine. The methods of this inner knowing are a central part of the quest. So to know the laws he has to know himself first. Physicists F. David Peat[*] and Basarab Nicolescu[†] argue correspondingly for an "end of objectivity" in which science realizes it cannot stand outside of the phenomena it studies.

Science does not equal dominant paradigm

The sociologist of knowledge should also differentiate between science as an endeavour for systematic knowledge and the prevailing scientific metaparadigm with its contemporary answers.

This means that scientific materialism – bordering on the view that matter is the basis of reality – does not equal science which signifies a general pursuit of expanding and sharpening knowledge. Far from having discovered the *most* general laws of reality, contemporary science is still drastically perplexed with much of the empirical data presented – principally in the realm of consciousness studies but also that of quantum physics, neuropsychology, biology and medicine. This is both a general insight and also one of the messages of integral theory. It fits Husserl's original anguish of the dissipation of modern science[‡].

[*] Peat 2007, 920
[†] Nicolescu 2002
[‡] Husserl 1954, 3-7

1.4 Scientific democracy

Another epistemological challenge with the phenomenological approach is related to the social structure of human consciousness which registers and evaluates scientific knowledge. This makes the situation rather complicated at least on the surface. The answer is subtly contained in the opening realization but it might stay unnoticed.

According to scientific consensus it is the society of scientists that conclusively evaluates and safeguards the evolution of science. Individual scientists and thinkers may suggest a wide range of different ways to interpret the in-itself-sterile data – facts and observations given to us by empirical and theoretical analysis. As we know especially from quantum physics the same data can be logically interpreted using mutually contradicting theories. This is why the procedure of scientific truth rests on the acceptance of the scientific community.

Scientific openness is of course a clear-headed insurance against tyranny and sidetracks. Are we not then mistaken to say that final proof or certainty lies in the experience of individual? Does this not lead to either relativism or fascism? Is scientific knowledge not rather collective and affirmed by many before declared reliable?

On the other side we should bear in mind the history of knowledge. Often there have been individual avatars of future vision resisted by the status quo; researchers and groups whose vision have been mostly validated by later generations. This perception has been much discussed as part of the very dynamics of scientific revolutions. Since much (and in many cases all) of the content of human consciousness derives from social conditioning we have ended up in a peculiar state of affairs. The paradox is this: while science provides us with a pioneering momentum to seek that which we do not know it simultaneously protects what is considered scientific now.

We tend to think that scientific protocol ensures itself and that truth reigns if we just make the experiments. But according to recent knowledge this is untrue. Instead our precognized scientific searchlight mostly determines that which we see worth studying. Even more: observations of modern physics affirm that the observer always influences the experimentation[*]. Just a passive proximity of a measuring device can alter the behaviour of elementary particles[†]. Also there is a

[*] see for example Goswami 1993, 38-42
[†] Laszlo 2008, 98-9

case in which strictly identical parapsychological trials are held by two groups. The other is led by a sceptic and the other by a protagonist of larger frontiers on human psyche. The latter gets positive results[*].

Echoing the attitude of phenomenology this suggests the following: A researcher or community seeking to uncover a world of inert materiality and Darwinian evolution find just that. Likewise those who seek a cosmos of multidimensional intelligent evolution dreamed forth by an omniscient, conscious and infinite background existence indeed find such a cosmos. Both parties experience a reality of their own accord and view the other reality as distorted, limited and incommensurable. Scientifically the only means to find out which of these carry the highest coherence is experimentation. One must become a measuring device himself and to identify with both these worlds.

Here it is necessary to remind the reader that even if mathematical and logical knowledge are at their own particular terrain indubitably free from the verdict of epistemological questions such as this, the state of affairs is totally different with our evaluation as to what mathematical and logical truths *mean* for us and our science. Mathematics and logic are servants. They do not tell us what to make of them.

1.5 Summary: Phenomenology of essences

Bringing together what has been presented in this chapter: we seek to understand how the archetypal world-experience of the integrally bent scientific community differs from that of mainstream materialist science. To do this we keep in mind several epistemological arguments: that science is by definition incomplete; that science does not equal the scientifically floored contemporary metaphysics called materialism; that the essential instrument of knowledge is our first-hand experience; and lastly that like ethnographical scientists we must calmly identify with various currents of knowledge in order to see their meaning from the inside and to conquer the gravity of our own metaphysical comfort zone.

Sociology of knowledge with such a phenomenological emphasis creates itself a distinct terrain of scientific endeavour complementing other disciplines. Empirical (human) sciences are by necessity

[*] Laszlo 2009, 165-8

bound to disciplinary methodological traditions and restrained areas of paradigm inquiry; otherwise they would uncover no reliable correlations. Analytical philosophy of conceptual discrimination on the other hand – while definitely a central element of any rational study – is wrought with endless complexities and speculation. History of western philosophy testifies how even the most compelling conceptual categories intermingle with other concerns of the thinker. Even the most ambitious attempts of say Kant, Wittgenstein or Whitehead to justify a standard account for epistemological, ontological and metaphysical ideas ever keep on opening new threads of thought. Mental ideas can not escape their primary nature as fleeting images, even if they deal *with* empirical evidence, mathematics or logic. They come and they go. They transform, evolve, expand, regenerate and communicate with the expanding landscapes of human history. No lasting results are to be expected from mere analysis.

The phenomenological approach acknowledges analytical discrimination and the results shared by empirical disciplines. Without them phenomenology would be useless. But like any reasonable macro-scale sociology it does not seek certainty from logical distinctions or sterile facts but applies them while observing phenomena. Such observation builds upon realizing our relative standpoint in history both intensively and extensively infinite[*] – and our inner experience as the measure of truthfulness.

To study a chosen phenomenon then signifies nothing else than calmly describing what one perceives while studying the phenomenon from various angles. It is up to the sociologist to discriminate as to which modalities of perception – empirical, speculative, intuitive or analytical – or what type of a mixture of these provides highest understanding of the target of study. No universal formula for creating this amalgamation exists. Phenomenological approach, then, is nothing more than a *testimony*. It builds on understanding empirical evidence and applying logical discrimination. But it differs significantly from modern social science which essentially impersonates the objectivity ideology of natural science. Contemporary social sciences aim at reducing the effect of the researcher and letting the data speak for itself by applying structured methods of human study.

On the contrary phenomenology argues that *direct perceiving* of phenomena gives highest clarity and *only it* allows complete inclusion of high order phenomena such as history of knowledge. The phenomenologist dives into the subject matter and testifies: what do I see? Instead of practicing

[*] Ferguson 2006, 52. A standpoint shared by both Weber and Husserl

structured methods of research he incessantly rehearses his inner faculties of perception and discrimination. While it is true that conventional scientific reliability is beyond such a phenomenology – that the approach delivers mere *impressions* – it is also true that unless a god-speed quantum computer is built any subject-eliminating structured approach studying human reality can not expand beyond local confinements at the infinite plane of objectivity. The deep ocean of human experience reveals itself only to phenomenology. A science attempting to rid the centrality of the subject becomes an empty shell.

To reach new frontiers the phenomenological and objective should join forces. Every outwardly communicated study of the miraculous existence we take part in is situational and should be approached like new. Especially a sociologist studying the macro-scale and phenomena impossible to operationalize must trust his gut feeling – his private sense of certainty – while combining arguments and pieces of information. While the carefully planned operations of empirical science ensure their reliability through outer methods of removing all doubt, the phenomenological approaches gain reliability from inner methods of logic and intuition.

Observing while participating

The task of the thesis has two sides mirroring each other: observation and participation. On the first hand we are cautiously probing the nature of our deepest scientific truths and how these truths are seen differently by a certain heterogenic group of nonconformists. On the other hand we too are engaged in this acclaimed historical storm-front not unlike those events spoke of as revolutions and renaissances. We think and speak in the field of legitimate scientific protocol which is organically grown together with the sovereign metaphysics of materialism. Yet each theme and question reflects itself against the opposition of the newcomer and we see it in a different light.

While presenting an alternative world-experience we must of course take into account the life-world of our audience. As historian G. K. Chesterton argues it is legitimate to present the familiar first and leave out the supernatural. Those who have convinced themselves that their own perception is familiar with the actual limits of reality deny not only the miraculous events witnessed by human beings historically but also the reason-expanding results given by modern science[*].

[*] Chesterton 1924, 123-4

The line between observing a competing paradigm and participating in it is difficult to draw. We are indeed flirting with the enemy. So it is that at this point the most loyal stewards of materialist science might wish not to engage this quest. To create opposition: we are like the sympathizer of the Indian or of the Jew and they are the loyalists who watch closely should we cross the line of lawfulness so they could report us in. It is no secret that the writer feels sympathetic with the integral experience. Without such participation no valid account is available. Sociology of knowledge has much in common with ethnology: unless we become part of the foreign reality we study we will never understand.

Chapter 2: Introducing Integral Science

Introduction

In this chapter we present a sociological outlook on the integral communities and the scientific paradigm they suggest. First we present tables of selected themes and institutions. Secondly we look into the studies of Paul H. Ray on the cultural creatives and give an example of local integral representatives in Finland. These tables serve as an introduction. Lastly the integral theory of Ervin Laszlo is introduced. This presentation gives a deeper understanding as to what are the scientific cornerstones of integral theory.

2.1 Integral themes and institutions

Attraction towards integral themes has been expanding for a few decades. The expansion manifests as a multiplicity of books, periodicals, seminars and institutions dealing with a wide spectrum of interdisciplinary topics. Not all participants adhere to the significance of all these themes, however, sociologically they are connected. The movement seems most lively in the United States while active throughout the globe consisting of thousands of communities and organizations.

The following table presents a selection of popular integral themes:

Life sciences	brain research, consciousness studies, holographic mind, alternative medicine, transpersonal psychology, parapsychology, near-death experiences, panpsychism, meditation, spiritual healing, self-healing, mind over matter, personal growth
Physical sciences	quantum physics, system evolution, macroevolution, theories of everything, quantum biology, information theory, field theory, chaos theory, self-organization, non-linearity, complexity, non-locality, multiple levels of reality
Social systems	convergence, personal growth, paradigm shift, global crisis, consciousness revolution, global brain, environmentalism, empowerment, thinking in wholes, holographic reality

Spirituality	combining science and spirituality, universal spirituality, self-realization, Veda-philosophy, Buddhism, mysticism, Gnosticism, pantheism, direct perception, meditation
General themes	consciousness, evolution, complexity, non-linearity, self-organization, coherence, non-locality, non-duality, transdisciplinarity, paradigm shift, transformation, accelerating evolution, limits of modern science, symbiosis of humanity and nature

The following table gives examples of integrally flavoured periodicals, academic organizations and scientifically pronounced transformational institutions to assist the reader in situating the integral experience. This list is partial and serves only as an introduction:

Academic organizations	
California Institute of Integral Studies	CIIS was established 1968. It is a pioneering integral university with 20 leading-edge graduate programs and circa 4,000 graduate and undergraduate alumni. CIIS "strives to embody spirit, intellect, and wisdom in service to individuals, communities and the Earth. The Institute offers interdisciplinary, cross-cultural, and applied studies in psychology, philosophy, religion, cultural anthropology, transformative studies and leadership, integrative health, women's spirituality, counselling, community mental health, and the arts. With its personal learning environment and supportive community, CIIS provides an extraordinary education for people committed to transforming themselves and the world." http://www.ciis.edu
John F. Kennedy University	A three-campus San Francisco Bay university with 12,000 alumni offers education on integral subjects up to PhD level. Their mission is "to provide access to high-quality, innovative educational opportunities that integrate theory and life experience. We inspire personal, professional and academic growth and advance the well-being of our diverse local and global communities." http://www.jfku.edu
The Institute of Noetic Sciences	A non-profit membership organization founded 1973. Their mission is "advancing the science of consciousness and human experience to serve individual and collective transformation", and "to expand our understanding of human possibility by investigating aspects of reality—mind, consciousness, and spirit—that include but go beyond physical phenomena." Today the institute carries out its mission as a worldwide research, education, and membership-based organization in Petaluma,

	California. http://www.noetic.org
The Graduate Institute	A non-profit educational organization accredited by the Connecticut Department of Higher Education in 2003. The institute offers MA programs for example in conscious evolution and holistic thinking. The Graduate Institute's mission is "to create learning communities in which graduate study enriches the spirit, promotes philosophic discovery, provides opportunities for interpersonal and organizational change and encourages intellect through the exploration of contemporary ideas." http://www.learn.edu
Center for Integral Science	Internet-based resource for integral science. Includes a listing of connected organizations and publications. http://www.integralscience.org
Association for Transpersonal Psychology	Connecting scientific institutions that approach psychology and psychiatry in an integral framework. http://www.atpweb.org
Center for Consciousness Studies at the University of Arizona	http://www.consciousness.arizona.edu
World Futures	World Futures: the Journal of General Evolution is dedicated to the study of irreversible, nonlinear, system-structuring change in nature and society. Published since 1986 with eight issues annually and edited by Ervin Laszlo. Scientific articles on various integral themes. http://www.tandf.co.uk/journals/titles/02604027.asp http://www.informaworld.com/smpp/title~db=all~content=t713393663
Interdisciplinary organizations	
EnlightenNext	A global non-profit organization plus magazine since 1988 is dedicated to catalyzing evolution in consciousness and culture. The participants strive to be leaders, examples, and pathfinders in the emerging field of integral and evolutionary spirituality and to stand for the ultimate relevance of spiritual enlightenment in our time. Readership according to staff is 75,000. http://www.enlightennext.org
Integral Life Integral World The Integral Institute	Non-profit sister organizations lead by American philosopher Ken Wilber. According to Wilber "integral theory is an all-inclusive framework that

	draws on the key insights of the world's greatest knowledge traditions. The awareness gained from drawing on all truths and perspectives allows the integral thinker to bring new depth, clarity and compassion to every level of human endeavour — from unlocking individual potential to finding new approaches to global-scale problems." http://www.integralinstitute.org http://integrallife.com http://www.integralworld.net
Club of Budapest	Founded in 1993, the global Club of Budapest is an informal international association dedicated to developing a new way of thinking and a new ethics that will help resolve the social, political, economic, and ecological challenges of the 21st century. Members include Ervin Laszlo (president, founder), Václav Havel, Jane Goodall, Desmond Tutu, The XIVth Dalai Lama, Paolo Coelho, Mikhail Gorbachev, Arthur C. Clarke†, Thomas Berry and Vigdis Finnbogadottir among many others. http://www.clubofbudapest.org
Integral City	A web-based solution for integral community-management and transformation http://www.integralcity.com
Spiritual organizations	
Art Of Living	An organization dedicated to spiritual transformation. AOL offers workshops for stress-elimination and arranges social empowerment programs throughout the world in villages, prisons and communities. Estimated 100 million people have participated in AOL activities. Led by Yogi Sri Sri Ravi Shankar. http://www.artofliving.org
Self-Realization Fellowship and Ananda	Worldwide SRF was established in 1920 by the Indian Yogi Paramahansa Yogananda in the United States. SRF educates individuals in scientific principles of living harmoniously and developing a tangible connection with Divinity. SRF teachings combine scientific knowledge with Christian and ancient Indian philosophies. Ananda originates in the same teachings while it emphasizes more the social dimension of transformation. Also other organizations and lines of teachers exist whose knowledge stems from the same Vedic sources of scientific spirituality. http://www.yogananda-srf.org http://www.ananda.org

University of Metaphysical Sciences and the I Am University	Examples of academically inclined spiritual institutions among many. UMS and I Am University offer degrees in esoteric and spiritual programs mostly for distant learners. http://www.umsonline.org http://www.iamuniversity.org

2.2 Cultural Creatives

Sociologist Paul H. Ray has studied demographic formations and found a pattern of lifestyle and belief which seems to correspond with the integral experience. Ray terms this group the *Cultural Creatives*. According to his decade-long study Cultural Creatives are scattered across social and regional groups. They share a distinct set of values which include environmentalism, holistic thinking, rejecting materialism, global issues, self-actualization and spiritual searching[*].

Further, Ray argues that in numerous surveys and focus groups three different worlds can be isolated. The other two among with the Creatives Ray titles Modernism and Traditionalism. The modernist current places value on consumerism, materialism, personal success and technological rationality. Traditionalists hold on to a more restricted version of Christian faith or national nostalgia, "good old times", as their central ideology.[†] From the perspective of this research we notice clear resemblance: the main metaphysical currents named here – integral theory, scientific materialism, and biblical creationism – seem to correspond with the three main social formations in Ray's research.

Most notably, the number of Cultural Creatives in the United States (in 1997) is 44 millions, or 24 per cent of the population. It is the only one of the three growing in ratio. This suggests that integrally bent ideas are not marginal or historically negligible. Instead there are reasons to call them "the emerging culture" like Ray put it more than a decade ago:

"… The emblematic values of the 1960 are being embraced by more and more Americans. Few in the media recognize it, but these ideas are coalescing into a new and coherent world view. When Cultural Creatives look at Modernism, they see and antique system that is noisily shaking itself to pieces."[‡]

[*] Ray 1996, 1997
[†] Ibid.
[‡] Ray 1997

This quotation matches with the depictions of many integral communities when it comes to their relation with material science. They do not attack the dominant paradigm very fiercely. They see it self-destructing and work on their updates of the integral scientific universe. All in all Ray's work supports phenomenological observations concerning a general ideal type of integral living manifest both among the above listed organizations and as spread all around in local communities as described next.

2.3 The integral community in Finland

In contemporary societies the integrally experiencing community – or the cultural creatives – express their unorthodox metaphysical perception in all pivotal elements of human behaviour. For example in Finland we can promptly distinguish four sub-currents with various emphasis but with a common integral outlook; each group crystallizing as a national level monthly magazine.

Alternative medicine	In the community of alternative and holistic medicine practitioners integral thinking is common. Based on (undocumented) ethnographic participation with some 60-70 alternative therapists it is estimated some seven out of ten to combine a version of the most common integral tenets of universal spirituality, personal growth and anti-materialism. Most of them seem unaware of any idea of a scientific paradigm shift since we are talking about a group mostly uneducated in science let alone philosophy of science. There is still a heated discussion on the setbacks of official medicine featuring many doctors and researchers commenting on experiences from unofficial trends of holistic health and cutting-edge research. As an arena of communication this sub-current employs the monthly *Luontaisterveys* (natural health). The community embraces a wide variety of techniques and healing arts from around the world such as acupuncture, supplement therapies, homeopathy, manipulation techniques and zone therapy. Also attention is given on positive thinking, psychosomatic working, organic and pure nutrition, purifying the body of toxins and avoiding many common medical methods and drugs such as antibiotics, blood pressure medicine and unnecessary surgery.

Popularized self-actualization http://www.voihyvin.fi	This rather commercialized current we see manifest in the magazine *Voi Hyvin* ("feel well") where a variety of ecological, spiritual, holistic, medical and personal growth themes are discussed. The image portrayed for the average reader is a trend of self-empowerment and healthy responsible living through positive thinking, proper eating, balanced exercise, introspection, spiritual practice, mind-body work and a selection of commercial products. These include organic foods, natural medicine, books on personal growth, retreats and courses plus branded methods of daily self-healing and introspection. Also a selection of clearly anti-materialist themes such as astrology, feng-shui and religious reflections appear as to slightly reveal the deeper perception shared by some of the readers and editors.
Universal spirituality http://www.minaolen.com	The heterogeneous community fully dedicated to variations of universal spirituality in many of its faces – Buddhist, new age, neo-pagan, universal Christianity, cabbala, esotericism, yoga, just to name a few – gathers annually at the MinaOlen–exhibition with thousands of participants. Being also a magazine this community evidently intermixes with the two just described. In one sense the above described alternative medicine and self-actualization sub-currents operate as a buffer for this metaphysically pronounced community where people are more serious with their alternative world views. The tools of integral living are more openly applied here. Healing with energy, spiritual communion, prophesying, channelling, meditation and scriptural study are a normal part of everyday living for these communities. The magazine proclaims freedom from particular faiths and isms while dealing with a variety of world views, religions, philosophies, arts, new sciences, health and a "developing life.understanding".
Esoteric knowledge http://www.ultra-lehti.com	Oft impossible to distinguish from the former this sub-current deals more pronouncedly with officially supernatural themes such as esotericism, mysticism, alien presence, conspiracy theories, channelling and occult knowledge. Magazine Ultra along with its annual summer festival at Kuortane manifest the world view of this integrally bent group. Most people submit to both MinaOlen and Ultra communities. The former is newer and somewhat

	larger while the latter is supported by a more aged community of Finnish esoteric individuals.

Much sociological observation and documentation is needed before we fully understand demographical borderlines and subtleties between integral and material communities and the subdivisions within each community. This introduction meets our present demand of superficially describing who and where is the integral community.

2.4 Pre-paradigmatic stage

"The fact that there is so much talk about critical agendas in our time indicates that a new perspective is not fully rooted, because too much is still unclear and controversial."[*]

The high-spirited agents of integral science have created a situation which might qualify as a pre-paradigmatic stage[†]. In this stage, broadly speaking, a substantial number of scientists among the scientific community have taken a step out of the dominant matrix of thinking and are zealously contributing to create new paradigm research. Yet there lacks a generally accepted bracket or framework similar to the influence of Darwin's ideas in the material paradigm. For this reason many are devoted to the search of the deciding blueprint that would trigger the establishment of a new paradigm core theory. The central luminary is still missing.

Observing the burst of these new theories and interests – and their collegial attitude towards each other – we can claim that the current is somewhat uniform. Since many integralists embrace a scientific approach it is reasonable to assert we are witnessing a pre-paradigmatic stage of integral science. What will it prove to be in a long term is another issue. British philosopher Peter Russell suggests[‡] – echoing the sentience of Ervin Laszlo, Ken Wilber and many others[§] – that we are not just witnessing the advance of more elaborate paradigms in particular branches or disciplines of science, or an alternative science altogether. Instead like subtly anticipated in the previous chapter the integral advocates prescribe *a radical metamorphosis of the entire western scientific organization*. In this view the three-and-a-half century old grand narrative of western reductive

[*] Woodhouse 1996, 6
[†] Kiikeri & Ylikoski 2004, 57
[‡] See Russell 2002
[§] see Chapter 1

materialism – or perhaps even the whole chapter of western seeking begun by the ancient Greeks – is approaching some type of culmination.

2.5 Ervin Laszlo's integral theory of everything

As evident there exists an abundance of alternative suggestions as to how theoretically outline the nexus of such a paradigm shift and approach this epistemic event horizon. Pre-paradigmatic stage seems yet more of a mess than a uniform development. We have chosen here as a key representative of the rising surf of integral thought the presentations written by systems scientist and philosopher Ervin Laszlo (1932-). In many respects he is the chief ambassador of integral theory. American philosopher Ken Wilber is perhaps the personage with most visibility. His organization work is much more active and his verbal presentations richer, theologically fused and epistemologically more far-reaching. We choose Laszlo for reasons of our comparative approach as he deals more elaborately with hard core natural science. While they agree upon elementary ideas – in Laszlo's view – Wilber merely discusses an integral vision without offering one[*].

With a career spanning five decades, four doctoral degrees and two Nobel Peace-prize nominations, his demonstration on the substance of integral perspectives also incorporates a calmness, logic and generality most suitable to the non-initiated scientific audience. In a recent publication titled The Akashic Experience[†] Laszlo brings together 20 leading authorities of various fields such as psychiatry, physics, anthropology, philosophy, modern art, business, spirituality and medicine. Each protagonist shares a first-hand report of his or her personal encounter with the integral experience. This way the author wishes to ascertain that integral experience is not limited to marginal individuals like yogis, mystics – or religious people in general – but it is lived as an everyday reality by people with a diversity of interests and backgrounds[‡].

Science and experience

Thus the emerging scientific reality of integral theory can be approached sociologically in two complementary domains, reflecting the overall subjective-objective split of modern thought: there is the science and the experience. The first domain consists of pioneering results in various scientific

[*] Laszlo 2007, 11
[†] Laszlo 2009
[‡] p. 242

disciplines; perhaps most importantly quantum physics, biology, medicine, consciousness studies, psychology and brain research. The second domain consists of the experiences of individual scientists and thinkers.

Without one another these domains can not exist. Pieces of evidence in various fields of research do not form a paradigm or even a candidate for one unless there issue a sufficiently uniform trend of experiencing what these often confusing phenomena might stand for. Reciprocally the subtle experience of "there might be more to reality than is generally recognized" can scantly become diagnosed by critical subjects as something other than temporary hallucinations unless there is an abundance of empirical data, corresponding theories and other scientists resonating with that non-verbal experience.

Laszlo presents his integral theory of everything (I-TOE) with careful rigor and propriety[*]. Introducing one by one the integrally fitting results from the main areas of cutting-edge scientific research he moves on to synthesize his grand theory. We render the approach regressively; first describing the theoretical network of concepts and while at it briefly exemplifying research that have lead scientists to formulate such ideas.

We must note at this point that any presentation – however rigorous – of reality possessing such subtle qualities as the theory at hand necessarily transforms, even if slightly, in the hands of commentators. The complete realization of the nature of the integral universe is experiential and by definition beyond the duality of subject and object. Everyone has to look into the telescope and study the principles themselves. The integral experience cannot be pinned down exclusively. Any vocabulary is limited and bound by historical impressions and relativities. So even while trying to remain descriptive the writer acknowledges Mr. Laszlo or other integral specialists might not give out the same faces of this multi-impressional system of thought and practice.

2.6 The Akashic Field

"You cannot create something out of nothing."
"Where does the energy of this machine come from?"[†]

[*] Laszlo 1996, 2004, 2008
[†] Headlines in the description of a perpetual motion machine at science centre Heureka in Vantaa.

The cosmic plenum or the Akashic Field is the footing of I-TOE. Akasha is Sanskrit signifying ether. According to Ervin Laszlo the Akashic Field is the core universal field out of which physical reality emerges. It is the domain of reality referred to by physics when they speak of quantum vacuum, physical space-time or hyperspace[*]. But the Akashic Field means something quite different than the ordinary-mindset experience aroused by these concepts. The A-field is not an inert supporting background of our universe, quite the opposite. In Laszlo's terminology the Akashic Field appears very lively, active and purposeful. Let us illustrate.

Like other known universal fields (gravitational, electromagnetic etc.) we cannot directly witness the Akashic Field with measuring devices. We can only measure the effects. According to modern physics each object of physical reality vibrates. Each universal field then supports or maintains vibrations of a property or "action" intrinsic to itself. Gravitational field transmits the vibrations of gravitation; electromagnetic field operates the vibrations of electricity and magnetism. The universal property of the Akashic Field according to the author is in-formation. The qualities of this in-formation are non-locality, creativity, wholeness and coherence.

In this view knowledge and information are not restricted to conscious individuals, computers or encyclopaedias – or even organic systems. Instead in-formation is a part of the basic weaving of reality. Laszlo's Akashic universe is much like Hegel's[†]: one living interconnected whole striving for ever higher levels of coherent forms.

Non-local coherence means that all objects and events – simply everything that ever exists and happens – vibrates throughout the universe via the Akashic Field without spatial or temporal limitations. Every minuscule event or object at all levels of reality from the atomic and molecular to the mental, social and spiritual, sends forth a pattern of itself and communicates – or makes waves – with other events through the information background of the Akashic Field.

So in the Akashic universe no event or thing is separated from the orchestrated symphony of the entire fabric of the cosmos. Events and objects do not appear in-themselves but arise as formations of various vibration patterns of the same underlying energy. The A-field is an infinite apparently

[*] Laszlo 2008, 88
[†] Schäfer 2008; 329, 350

unchanging[*] sea of energy and potentials while the visible reality – space-time and vibrational events – dance on its surface.

2.7 The architecture of reality

In the I-TOE matter is not the starting point of an investigation of reality. Instead matter is just one level of vibrating energy. All of these basic levels of manifest reality – matter, energy and consciousness – have their causal origin at the same basic substance or source: the in-formation of the Akashic Field.

Laszlo divides the integral universe into two basic domains: the domain of actual entities and space-time, and the domain of the A-field[†]. The field domain is primary: "it is the generative ground of particles and societies of particles that populate the space-time domain"[‡]. The observable cosmos results from "events" of the A-field which remains substantially unaltered in its non-spatial and non-temporal infinity. In other words there is *first* the unmanifest insubstantial reality – pure in-formation – beyond concepts resting on ideas of space and time. This then gives birth to and supports the cosmic drama of manifest universe with spatial and temporal dualities, forms and patterns. Laszlo illustrates how new research in particle physics supports this theorem: matter in its particle-form always has vibrational wave-properties, but not the other way around[§].

Another influential demonstration on the two domains was made by Royal Society quantum physicist David Bohm[**] with his more technical notions of the implicate and explicate orders. For Bohm "in the explicate order the totality of existence is enfolded within each region of space (and time)"[††]. Also he maintains that "the entire universe has to be understood as a single undivided whole, in which analysis into separately and independently existent parts has no fundamental status".[‡‡] Yet another similar description is given in ancient Indian *sankhya*-philosophy where reality is also divided in two domains of Purusha (consciousness or Spirit) and Prakriti (Phenomenal realm of matter).[§§]

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[*] Laszlo makes no clear comment on this
[†] Laszlo 2008, 113-4
[‡] Ibid.
[§] Laszlo 2007, 140-2
[**] Bohm 1980
[††] Bohm 1980, 218
[‡‡] Bohm 1980, 221
[§§] Yogananda 1999, 889–894

Laszlo does not answer directly the question: What is the Akashic Field? He does delineate a deist theology by drawing an image of a logically necessary transcendental creator without a necessity of divine intervention. Something simply can not appear from nothing. But the A-Field does not equal God. It is a discovery of modern science by itself not sufficient to explain reality in its totality; a subtle, real and central domain of our universe that brings together phenomena otherwise difficult to integrate. But it has no properties explaining its own appearing in the first place. Laszlo acknowledges this. The original creative act and the creator are according to Laszlo beyond empirical verification[*].

The fantastically fine-tuned constants and laws of nature Laszlo explains with his theory of evolutionary Metaverse[†]: there have been multiple consecutive universes each inheriting the informational characteristics of its ancestors via the universal floor of being and events, the Akashic Field. How the original process started, why it is running and why does it seek expansion and ever higher forms of coherent complexity – these questions Laszlo presumably leaves for the integral theologians to answer.

One of the key properties of the Akashic Field both for applied sciences and metaphysics is acknowledging the persistent historical substantiality of non-local events. This signifies phenomena in which causal effects are transmitted across space and time in ways that can not be understood by the mindset of material science or common sense. These events take place in both physical and mental domains of manifest reality. Physical effects and mental images are both showed having the capacity of transcending space and time in extraordinary ways. These events are often talked of as quantum effects or studied by parapsychology. In both cases they are pushed outside the established paradigm as they make little sense to it.

In the reality of the Akashic Field it is no miracle that effects or ideas travel non-locally across space and time. The manifest universe evolves – while leaving relative autonomy for subordinate levels of reality – in its own accord as a single whole. Laszlo describes the cosmos as a single quantum system where everything is connected. It acts correspondingly to the human body – also a quantum system – in which cells, tissues and organs act with some autonomy but still immediately responding to the conscious (or unconscious) will of the subject.

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[*] Laszlo 2008, 113-4
[†] Laszlo 2007, 34-42

For more elaborate explanations and descriptions of non-local events such as quantum effects, distant healing, telepathy and remote viewing the reader should study introductions of decade long research and meta-analyses conducted in university faculties around the globe[*].

2.8 Coherence and cosmic evolution

Not only do events and objects vibrate and intermingle non-locally and immediately throughout the universe but they do this in a coherent manner. Coherence signifies a type of orderliness or harmony. With coherence Laszlo refers to something more universal than the coherence in a light source. In all domains of research – the atomic, molecular, biological, psychological, social and cosmological – science witnesses a tendency towards self-organization[†]. There exists a counter-force to the law of chaos and entropy; a deeper inclination to organize into ever higher forms of integration and complexity – organisms, life, and consciousness. The notion of coherence conveys the all-round hierarchical stability and a nearly mystical ability of nature to bring about order, life and meaning at all levels.

This way Laszlo brings together the widespread pantheist and mystical sensibilities with the themes of evolution. Lower life forms are the immediate causal cause of higher forms but there is a deeper global causality that has impregnated the universe with this impulse and keeps on participating in evolution through the coherence of the whole cosmic process.

2.9 Matter and consciousness

These two terms receive a very different meaning in the I-TOE. As mentioned above consciousness is not a quality found only in human actors. The human brain does not create consciousness but instead amplifies a basic in-formational property inherent in the cosmos. In other words since the very core of reality operates by means of in-formation so the very domain of knowing, or experiencing, exists readily at the conception of the manifest universe. This resolves the hard problem of consciousness which material science admits being incapable of solving[‡]. The hard problem signifies the inability of material philosophies to explain rationally how the inner experience of conscious human beings emerges from neural networks which are purely material.

[*] See Radin 1997, 2006; McTaggart 2002
[†] see Jantsch 1980, Halley & Winkler 2008, Fuchs 2003
[‡] Peat 2007, 925

The standpoint is called panpsychism in the philosophy of mind. There are various subtypes of panpsychism[*]. In Laszlo's version matter and consciousness are two complementary – separate yet interdependent – domains of manifest reality. Following A.N Whitehead Laszlo describes every object and event having a mental pole and a physical pole[†]. Matter is an aspect we apprehend looking at things from the outside, and mind is a view from the inside. Laszlo's solution takes a third alternative instead of materialism (matter creates mind) and idealism (mind creates matter). For him these domains are mutually dependent and ever present albeit in different constitutions and mixtures.

2.10 Scientific research pointing towards integral realities

Evidence reinforcing the reality of the A-field plus non-locality and universal coherence derives from various branches of scientific research. Standard examples come from quantum physics. Other evidence comes from neuropsychology and consciousness studies. This research is often titled parapsychological since it reveals non-local effects. Various presentations have been written gathering anomalous research. In this study it suffices to state that these presentations witness a vast and enduring tradition of strictly performed research by educated scientists in respected faculties. The efficiency of the materialist ensemble in protecting itself from the implications of these studies is a matter of another careful study.

The task of sociology of knowledge is not to say which of the reality-experiences is true. Sociology of knowledge identifies and describes those currents while each makes his own experiments. For us the integral science is a phenomenological reality the existence of which is confirmed by evidence from many levels: the thousands of PhD's at meditation workshops, acupuncture at state hospitals, holographic wrist bands worn by NFL and NHL athletes[‡], persistence of religious experiences – and the acceleration of human evolution.

[*] See Skrbina 2005, Mathews 2003
[†] Laszlo 2007, 111-3
[‡] http://www.powerbalance.net/

2.11 Summary

In this chapter we have broadly introduced the lifestyles, communities and beliefs of integral reality. Clearly no superior integral theory has to date been accepted. Many unconventional elements intermix with each other and with materialist sentiments so that few individuals portray as integral ideal types. Central elements can however be put forward such as combining science and spirituality, and sensitivity to larger domains of reality unknown to material science. The deeper implications of integral experience are studied in chapter 4.

Chapter 3: The Materialist Reality

Introduction

In this chapter we describe the reality-experience stimulated by material science in major areas of inquiry such as biology, cosmology, medicine and ethics. The objective is to reveal elemental assumptions in regard to epistemological and metaphysical issues. The result is an answer to the question: How is reality like according to material science?

3.1 Approaching the materialist reality

As a reminder we summarize the basic methodical insight:

Science is always theory-laden and does not claim direct access to absolutely objective reality. Any historically evolving scientific program rests on a core epistemic/metaphysical paradigm upheld by community of scientists and their audience. Proof of the truth of a paradigm – its focal metaphysical assumptions – is essentially phenomenological: the phenomenon of convincing appears solely at the inner experience of individuals who adopt and apply any mode of interpreting reality suggested by a paradigm and the society perceiving according to the paradigm.

So the core theory is verified only partly by experiments and also by the experience of the community of scientists and lay people who adopt the theory's assumptions. This they do by approving supporting evidence and seeking plausible explanations for unfitting observations. Science is ever open to new theories and paradigms.

3.2 Darwinism and scientia mensura

Scientific materialism[*] is a demographically and politically heavyweight community in which two core ideas prevail and determine the reality-experience of people. Firstly we have the *scientia mensura* –principle which states that scientific protocol is the highest source of truth even while the protocol itself is still evolving and incomplete. Secondly that Darwinian biology (together with

[*] Often accompanied by epistemology of *scientific realism* emphasizing the increasing correlation between objective reality and scientific theories: Luoma 2008, 75; Kiikeri & Ylikoski 2004, 223-8

other natural sciences) is to date the most extensive theorem explaining the central phenomena of life and experience.

Like discussed in the opening chapter these two principles are often confused as one idea of scientific truth. Actually they are two completely different themes as argued throughout this study. It is vitally important to distinguish between science as a global endeavour and the contemporary version of scientific truth. Science does not equal scientific materialism.

The first principle belongs to the domains of ontology and epistemology. It has rather limited validity for the majority of the inhabitants of our material mind-universe. Ontologically *scientia mensura* means affirming that the domains and entities suggested by the most elaborate scientific theories are real[*]. Epistemologically *scientia mensura* roughly equals *scientific realism* by supporting the idea of a self-correcting intelligible scientific method which slowly approaches truth by revealing the actual processes of our reality.

In a sense this idea corresponds also with the approach of this essay: that we might be wrong but it's still practical to perceive our most up-to-date guesses correct. Without such an approach we either paralyze or end up in the Hades of nihilism.

But *scientia mensura* gives us nothing more than an antiseptic ideal of scientific truth-seeking – no substance to work with. The other theorem, Darwinism (in combination with physicalism) is the modern substance of science and the ground footing of scientific materialism. It gives the materialist society its religion in the etymological connotation "that which binds"[†]; what brings together various scientific insights. Darwinian concept of evolution is the modern grand narrative material scientists apply when major themes of life are weighed. Physical sciences explain inert matter whereas Darwinism explains higher order phenomena all the way up to the emergence of science itself.

The life-world reality of Darwinian evolution or the ideology of materialism consists of three themes. First there is the theory of life as a result of random mutations in matter. Life has arisen accidentally as a self-replicating gene-machine in a material cosmos without any original purpose and while evolving it follows the "greedy" laws of growth and survival.

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[*] Pihlstrom 2003, 58

[†] From Latin *religare,* signifying *to bind*, Yogananda 1924/2008, 13

Second theme involves human phenomena such as culture, morality and also knowledge and metaphysics. Since these realms have emerged in this process of aimless evolution there is no original background to reflect upon. What is considered good, right and beautiful is relative to any given era, creed or even individual appetite. There is no absolute human truth apart from natural science.

Natural science studying nature without the participating subject stands out as the mother of all epistemic systems since it alone studies reality in its original undistorted form. The concepts of nature and naturality with their subtle connotations of neutrality and exactness express how materialism locates human beings with even their highest aspirations to the realm of evolved animals. Quote from biologist Turunen illustrates the materialist sentiments:

"…the genetic background of religious experiences has been studied. This research gives basic knowledge of factors governing human behaviour. Results can be interpreted so that religious behaviour is a type on instinctual function. It has evolved so that we can cope with otherwise intangible phenomena."*

In the terminology of sociology of knowledge these two components – purposeless evolution and emergent humanism – can together be seen as composing the foundation for the *symbolic universe* of scientific materialism, constantly re-created by processes of legitimation, socialization and institutionalization. A more empirical account of these processes is part of the task of sociology of knowledge together with social psychology. This task is not at the scope of this study. We look at the third theme later in this chapter after analyzing more deeply what materialist randomness signifies.

3.3 Further elaboration of materialism

In the materialist narrative our reality has arisen from a singular physical emptiness. The beginnings and anticipated endings of the universe are studied in the framework of physical sciences. The instruments for understanding are theorems and calculations of physics and chemistry; and their devices measuring phenomena in the realm of matter. Laws of the behaviour of matter tell the scientists how things are as they are. Cosmologist Kari Enqvist condenses the materialist attitude:

* Turunen 2007, 79; author's translation

"By now much of what mankind has perceived mystical, divine or larger than life has appeared to be a massive calculable complexity generated by simple microscopic events." [*]

The causal chains perceived by materialist cosmology are local, particular and random. We have an image of the infant cosmos as a boiling and bursting furnace. Each effect is transmitted to the next target independently, at random. The original moving cause is seen as a type of sudden instability in the mysterious compressed singularity of non-reality. As a result of this instability the unexplainable original singularity was spread out as energy inhabiting this matrix of space and time. Galaxies and solar systems condensed later on. In the cosmos motion is a result from this original event while in itself everything tends to even out and all differences cancel each other. Solar systems and planets are mainly closed systems.

Again the most abstract and mature theories of materialist cosmology are more complex and subtle than this simplification. We only intend here to discuss the overall phenomenological impression of the foundation material science builds on.

As discussed above the infamous theorem which explains life for the materialist mind-set is the Darwinian concept of evolution. The spiralling motion and collision of matter – having first condensed into planets and stars – repeats in astronomical numbers of random varying scales and sequences. Then a quasi-miraculous event takes place: a random amalgamation of matter begins replicating itself. This replicating-machine expands in number and following the logic of expansion and randomness mutates again and again finally becoming a unit *desiring* to maintain and expand itself.

The logic then goes on unchanged from single-cell units into higher organisms into human beings: large quantities of self-maintaining units, lots of time, random mutations of which the useful ones remain because they are useful. The ability to experience and all human phenomena emerge as a result of this process; as epiphenomena of randomly evolved organisms with nervous systems. The blind hostile universe continually threatens to cut off this strange chain of conscious adventuring. This is the material story of life.

Medicine

[*] Enqvist 2009; author's translation

Materialist human science peaks at medicine. The promises of social, cultural and speculative sciences to provide unquestionable lawfulness have not bear fruit. So the arena where human affairs and objective scientific truth meet today is materialist medicine. Of course other human sciences provide much reliable data while medicine struggles with many issues. Yet the hard data procedures and cumulative expansion of material medicine have formed from it the system of human knowledge closest to ideal sciences of physics, chemistry and biology. Medical professionals are the Brahmins or priests of modern society: the ones in charge of birth and death, pain, sickness and health, sanity and insanity – most of the deep issues of human experience.

Historically medicine has co-evolved not only with natural sciences but also with theology, psychology and other life-sciences. In the practical working with humans and their complex troubles much intuitive wisdom and indeterminate methods have always interlaced with the systematic knowledge of medicine. In addition many medical professionals are sensitive to mind-body-connections transcending bureaucratic protocol. So the following description is a crude ideal type for our present purpose.

Materialist medicine looks at human beings as conscious animals; bio-chemical organisms with various tissues, organs and physiological processes plus an iceberg-tip of psychology and mind. The healthy body is one without pain and known malfunctions. Such a state follows from healthy genetic inheritance, good luck and proper behaviour. The highest priority for materialist medicine is preserving life since no afterlife horizon exists. The secondary objective is removal of uncomfortable pain which for materialism is a phenomenon of mere signal-processing and might later be replaced by uncomfortable methods of mind-body feedback.

Sickness arises when a tissue, organ or process decays for some known or unknown cause. The medicine practitioner attempts by statistical knowledge, testing and logical exclusion to find the mechanical, biochemical (or neurophysiologic) cause of the unpleasant state. Chemical medicines or local procedures are then applied to cure the state by intervening particular material processes of the human body.

Much medical knowledge is statistical description of prevalence which says accurately how many will get a particular disease. Medicine knows less why a certain individual falls ill while the other does not. As a result we have a social idea of a *sickness lottery*. This is Darwinian randomness in operation.

The model of health and sickness in materialist medicine builds on the function of the singular cell analogously with Darwinian evolution theory. Even if much understanding on more complex organic and psychological phenomena has developed the sphere where materialist science most pleasantly works is where it can be totally sure with objective methods. This means small-scale local effects at the realm of biochemistry. Medicine and is constructed working with the micro and nano; attempting to intervene processes connected with known physiological malfunctions.

Pathological categories are built according to either the material cause or manifestation of a particular disease. Causal pathologies and related tests are formulated when medicine succeeds in revealing the biochemical mechanism underlying a state of disease. Most descriptions still lack such certainty due to the complexities of human physiology and mind-body interrelationship. In effect we have – especially in neurology and psychiatry – the symptom describing pathologies of *syndromes* which are statistically connected groups of malfunctions. In many individual cases outside the evident twisted ankle and brain tumour it is impossible to exclude all causal possibilities or even to find a suitable description for the group of symptoms. So in reality medical practitioners do not always know what is wrong. Statistically fine-tuned medicines help them to clear out symptoms and hope for self-healing.

The ideal type of medical success is the acute case of life-threatening disease. Undeniably medicine has evolved great abilities to solve acute problems of danger to save patients life and body functions. In many cases of chronic and ambiguous ailments modern medicine has less competence since in the causal chain combines a complicated set of factors at realms outside medicines functionality. The factors include environmental, social, life-style, psychological and spiritual causalities all acknowledged by medicine but mostly outside the reach of medical diagnosis and treatment due to their multilayered complexity.

The social and psychological

In the materialist life-world due to the failure of the positivist ideal there exists no generally accepted scientific depiction for the psychological and social epiphenomena of mankind – apart perhaps from their origin as selfish cultural memes and emergent epiphenomena. Lately medically pronounced disciplines such as neurophysiology and cognitive neurosciences have expanded their pool of knowing and often serve in filling the gap between the physiological and mental, between

body and mind. These disciplines stress the neurological origin of human experience akin to Darwinian materialism. They attempt to create explanations to various psychological and social phenomena applying the general idea which argues that what goes on in the electrical fireworks of the nervous system determines what goes on in the mind.

In human sciences such medical Darwinism still remains a minority albeit a growing one. Materialism leaves relative freedom for human agents to establish personal moralities and philosophies existing beyond its machinery of objectivity. The pluralist multiplicity of mixtures of existential, analytical and artistic philosophies in the materialist societies testifies this image in which higher cultural forms stand alone in the roof-top of evolution battling for continuity, expansion and local gain.

There is a deep-seated habit for materialists to perceive human beings and societies similar to the selfish gene; always seeking personal gain and pleasure even in the most philanthropic endeavours. Social conditions for this hedonist self-actualization follow the law on greed and randomness. Apart from a clan of old school Marxists and semi-materialist transhumanists recognizing the reality of self-organization few believe in any type of teleological evolution of society.

The human mind witnessing the drama of evolution as described previously sees itself as a sort of accidental subjectivity sidekick. Since mind and experience emerge from the more fundamental physiological properties a materialist dreamer has very limited horizon for emancipation. As the time comes for the organism to cease working the experiencing self within the biological constitution evaporates.

Subjective psychological conditions experienced by people are private. The subject is trapped inside his biological carrier. Thrown randomly to a hostile universe he can choose freely which mode of action and thinking to follow. What he thinks makes difference only to him. How he acts effects him only in the measure of how people and events near him respond. Many material thinkers stress the extent to which the free will of humans is conditioned by surrounding society.

Malfunctions in the realm of mind are studied in the framework of medical pathologies which categorize neurological imbalances and syndromes of mental dis-ease. Recently approaches focusing purely on the psychological level have retreated farther from the core of science while the

neurophysiologic approaches gather strength. This testifies of the superiority of the medical approach in materialist human science for it has most relevance for Darwinian core paradigm.

Good and evil

In materialism both individual and social sensitivities concerning good and evil belong to the same the-ape-began-to-think category with religion, philosophy and other immaterial considerations which material science sees essentially as local and historically relative. Affinities between scientific materialism and the present behaviour of western market economies are also easy to recognise. In the materialist experience no transcendental agent prescribes a superior morality. Human actors and communities evolve as local formations and leave no track beside historical records and ecological effects. Being good or evil is either a private choice or social conditioning. Universal goodness does not exist.

Philosophers try to describe universal codes of good behaviour but these are not the foundation of humanity. They are arrived at. They might change later on. Either have morality and ethics any logical correlation with happiness. Some people are happy and others not while others fluctuate. Since happiness is a subjective experience no law predicts is prevalence.

3.4 Protecting the materialist paradigm

The above mentioned third component of the materialist (or just about any) life-world experience is more subtle – and more central for the study at hand since almost entirely unrecognized. It encompasses scantly visible phenomena of reification and system protection. To grasp these we apply a metaphor borrowed from systems theory: any complex system that thrives to maintain itself needs to build a semi-permeable membrane around itself like cells and organs in the human body or like nations and financial units in society. This membrane administers, to speak bluntly, what comes in and what goes out. Such traffic control is necessary to provide coherence for the system.

What does this analogy signify in the case of reality-experience reification?

Reification signifies simplification, popularization and a process of cleansing outright uncertainties from the metaphysical system and presenting it as a foundational authority. So we traffic supporting ideas in while throwing anomalies and unfitting theories out. Observation on the practice of science

often suggests that both individual scientists and groups are quite far from the calm objective ideal of science: they tend to select lines of thought and research that fit their (financers) ambitions and general worldview. They rarely need question the core assumptions of science openly.

This resonates also with the *scientia mensura* principle: since we hold fast to the thought that science is on the right path even if still unfinished, we can justly discard seemingly unfitting phenomena – we just have to wait for future science to show why these anomalies seem so extraordinary at present.

Such system protection is also quite useful in a social context. To apply any given metaphysical system while governing a society the system has to be presented to the non-initiated layman audience as 100 % truthful even if the experts know this is not really the case. Only advanced scientists know how little our science knows.

Here we find a peculiar analogy with spirituality and religion where the most devotional mystics and saints tend to stress their un-knowing. For example physicist Niels Bohr who studied also Chinese philosophy maintained[*] that scientists immediately contaminate the emblematic findings of quantum physics as they begin speaking of them using terms derived from our large-scale everyday experience. The variety of philosophical interpretations and debates on quantum physics ever since supports Bohr's conclusion: as we move from the quantum to the visible, the life-world of the interpreting subject determines what the quantum explorations suggest.

Along with socially legitimate simplification which science researchers often compress under the title *popular concept of science*[†] we have a more phenomenological type of simplification and reification we might term denial. Materialism – or any ideology in a like position – would annihilate itself should it constantly flirt with enemies. So instead of detached reality-probing we often witness a rather human protective and denialist tendency of the materialist life-world.

Competing paradigms and trains of thought are pushed out. Religious, spiritual and mystical currents of thinking and experiencing especially are considered as offering absolutely nothing to the evolution of core science. Quite the opposite, many see them hindering science's progression. Since the experiences these outsider people report contradict the metaphysical core of the mother-

[*] Peat 2007, 923
[†] Kiikeri & Ylikoski 2004, 21–23

paradigm they are amassed and labelled with a uniform sign: hallucinations and wishful thinking. Paradoxically the more irrationality we have the easier it becomes to explain phenomena away as irrationality.

For the supporters of materialist reality it usually suffices to make a quick reference to the phenomenon of belief in supernatural phenomena. Widespread religious and otherwise intangible sentiments are explained as a die-hard historical remnant from the dark ages of belief which is now subdued by the enlightenment of materialist science. There is also a widespread tendency to explain social evil with this persistence of religious hallucinations and the behaviour of religious institutions.

3.5 Summary

As a synopsis: the materialist-minded community endeavours to explain more and more phenomena with the grand narrative of physicalism combined with undirected Darwinian evolution and while at it protects from the gloomy currents of spiritual and magical hallucinations. The persistence of mystical experiences is due to their mighty historical momentum and ignorance of materialist ideas of natural science. Materialist common sense builds on the unity of objective scientific method and physicalist evolution theory.

Should there be expansions in sciences portrayal of the physical cosmos at least there is an explanation of why we humans are here: for no reason. Many breakthroughs are expected in the outer details of natural science but the philosophical grounding is ready. Religion and even philosophy are remnants. Their importance is steadily diminishing from being real science into methodological support and personal hobby.

Advanced material philosophers or other sensitive observers might not agree with such a simplification. The actual life-world of many thoughtful materialists and agnostics is much more complex than these generalizations suppose. Yet sociologically speaking these are the main lines followed by modern scientifically steered institutions as they educate and shape our society.

Chapter 4: The Integral Reality

Introduction

In this chapter we describe broadly how people in integral communities experience reality. The account is comparative so that emphasis is given on those perspectives that stand out as antithetical to the materialist reality-experience. The chapter begins by describing the integral approach to the duality of science and religion. Following this the basic elements of integral experience are evaluated along with the integral approach to central disciplines of evolution, cosmology, medicine, psychology and morality. Like in the materialist life-world not everyone in the integral camp shares the exact same setting of reality-experience. This account is a panoramic outline.

4.1 Elemental approach

"In the mutual co-causality of a self-organizing universe truth will always be in flux, and knowledge likewise needs to evolve in phases … [A]s long as we restrict knowledge to a combination of reason and sensory empiricism, we will remain trapped in the "catch-22" at the heart of science."[*]

First we note that integral scientists seem to approve readily the *scientia mensura* –principle. They appear fond of rational science and awe its ability to explain and expand. But they are critical of the Darwinian vision and the objectivity theorem. Integral theory embraces evolution theory but the principles of evolution are quite different from those of materialism. Integral thinkers embrace a self-correcting scientific protocol but see it stuck at the ideology of Darwinian materialism. They often retrospect 17th century perceiving the above outlined system protection analogically with the obdurate attitude of the Catholic Church when faced with the theories of emerging natural science.

"All knowledge other than scientific is thus cast into the inferno of subjectivity, tolerated at most as a meaningless embellishment or rejected with contempt as a fantasy, an illusion, a regression, or a product of the imagination. Even the word *spirituality* has become suspect and its use has been practically abandoned.

Objectivity, set up as the supreme criterion of truth, has one inevitable consequence: the transformation of the subject into an object. The death of the subject, which heralded all other deaths, is the price we pay for objective knowledge. The human being became an object – an object of the exploitation of man by man, an object of the experiments of ideologies that are proclaimed

[*] De Quincey 2005, 72

scientific, an object of scientific studies to be dissected, formalized, and manipulated. The Man-God has become a man-object, of which the only result can be self-destruction. The two world massacres of this century … are only the prelude to self-destruction on a global scale."*

4.2 Defining the coexistence of science and spirituality

Also we must observe that even if there is a sense of theism involved a clear-cut distinction should be kept in mind: most integral scientists are highly critical of the dogmatic Christian metaphysics often manifesting under the title Christian creationism – and also of the rainbow-coloured new age discernment along with other local belief systems. Original ideas by Jesus Christ and those of mystics and scholars like Plotinus, Augustine, Spinoza, St. Francis, Meister Eckhart or Pierre Teilhard de Chardin are frequently mentioned by many integral scholars. There is still little trace of the closed ideology of popular religious Christianity.

In any case the central element of integral experience is scientific openness towards mystical and religious experiences. This does not by any means denote childlike approval of a selection of (or at worst all) competing and oft irrational explanations of these phenomena as many religious and spiritual dilettantes think. Such naivety would severely fragment the reality-experience. Much of integral scientific discourse indeed combats not so much with legitimating the paradigm in the eyes of the materialist community but against the same wishful thinking materialism scorns at. They also seek internal coherence as a metaphysical system.

Using a biblical vocabulary we might say there is an abundance of false prophets with magnetic but still partial solutions. Sociology studying the process of a possible paradigm shift must distinguish the naïve popularizations of mystical and religious experiences from the rationally coherent and self-correcting theorems of integral scientists. This is not always easy though.

4.3 Essential elements

What distinguishes integral experience and the accompanying perennial philosophy – and the sprouting integral paradigm of science – from the materialist mind-set is the principal experience of reality, life, selfhood and evolution. Instead of random physical evolution integral theory delineates

* Nicolescu 2002, 13-14

a *self-conscious cosmic evolution* where life and consciousness are no accidents. Creationism in disguise? Again yes and no: no to dogmatic biblicanism and yes to a variety of spiritual experience.

What evidence could confirm such a view? As discussed above no piece of evidence has this power. What happens is that scientists *see* a living purposeful cosmos – they live in one. A composite of phenomenological evidence integrates to form this picture in both their private and communal life-worlds: evidence revealing the fleetingness of matter, the expansiveness of human cognition, the magical self-organizing ability of nature, studies in parapsychology and near-death-experiences, direct experiences of divinity etc. Apparently the entirety of their personal life becomes a testimony of the integral reality:

"My story, I came to see, is itself a microcosm of what is happening not only in modern philosophy, but throughout modernity."[*]

The three components

Three pivotal components of this integral experience mirrored against the formula given by Ervin Laszlo are:

1) An interconnected living/evolving universe
2) Personal growth and responsibility
3) Transcendental realities

Let us describe these aspects in detail.

1) The first aspect suggests that our reality is not inert but intrinsically living. The expansion of life and consciousness into ever more fantastic and complex manifestations results from the qualities or "desires" of our universal background. Scientists term it the Akashic Field (or the implicate order etc.) and approach it via the epistemic relativities of different scientific disciplines. Mystics and philosophers approach it with intuitive and logical discrimination. Rigorous spiritual practice strives to build focus and devotion in the disciple so that she can experience reality more deeply and directly access the higher domains of realization.

[*] De Quincey 2005, 35

View of the interconnectedness of reality supposedly correlates with an experience of oneself as a part of a grand scheme. Opposing the random isolation experience of materialist life-world in the integral experience people report feeling at one not just with other people but with nature, humanity, cosmos or even God the originator. All events to the tiniest details are given meaning in relation to the whole universe. There is a sense of "everything happens for a reason".

"Distinctions are not real. They are fleeting whispers of an all-pervading, subtle, non-expressive potential reality. The world is not made of separate things. Mind is not separate from matter. And you are not separate from any other being, animal, vegetable, living, dead, or seemingly inanimate matter. The kingdom of heaven and the island of hell lie in you. In you lies everything you have always wanted to know."[*]

Most integral approaches open to the experiencer a reality where normal behaviour includes phenomena such as self-healing, distant healing, intuitive learning, synchronistic experiences, controlling physical reality by concentrated thoughts, out-of-body experiences and expanded states of consciousness – just to give gross examples. The subtleties of these phenomena can – as the reader knows by now – only be realized through personal application. Seen from the outside they mean just as little as a book on theoretical physics. Seen through personal experimentation and application they seem to open up new worlds.

Furthermore the experience of unity or interconnectedness signifies that none of the integral approaches fully exclude the others. They all study the same underlying conscious infinite unity which outwardly manifests as the temporal physical-energetic universe. Most important for the framework of sociology of knowledge is that thousands of doctoral scientists and other intelligent minds actually live in such a reality and while acting outwardly sane they want more of it. It seems to be making at least some of them feel quite happy and balanced.

2) This leads us to the second aspect of personal growth or participation. Since reality unfolds as a single whole in relation to some hidden principle of conscious creativity it is evident for the integral scientists that their own action makes much difference. According to both research and shared integral sentiments the experiences of larger domains of reality (such as in prolonged prayer and meditation[†], near-death experiences[‡] or spontaneous spiritual awakening) evoke a sense of empathy

[*] Wolf 2001, 17
[†] Wallace & Cullen 2006. For meditators this seems to happen via enhanced concentration and control of emotion.
[‡] Touber 2005: On cardiologist Pim can Lommel's research and other studies on near-death experiences see www.iands.org

and empowerment that directs people to shift their focus in morality and directing of life. They now strive to work primarily for the whole and only secondarily seek pleasure for themselves.

Another type of shift in values turns people's attention to the experience of unity itself and away from temporary phenomena. For those with sincere effort this experience becomes an expanding sense of peace, compassion and freedom. This then helps to lead a better life but seemingly the experience itself is what really counts. This is the reason why so many spiritually minded people seek seclusion.

"What is the value of the experience of unity? For the mystic, it opens the door for a transformation of being that liberates love, universal compassion and freedom from the bondage of living in acquired separateness and from the compensating attachments to which we cling."*

3) The third aspect epitomizes the commonly experienced altered states of consciousness. As the personal reports of Laszlo and many of his colleagues signify, transcendental revelations of an expanding reality experienced historically by many are continuing this very day. Even having been initially socialized in the materialist paradigm does not prevent scientists from transmitting their inner experience to subtler domains and non-local realities. Perceived as escapism, religious nonsense or psychiatric disorder in the materialist life-world but as healing and self-realization in the integral.

"[I]f we are ever to have a comprehensive cosmology, one that includes explorations of the inner cosmos as well as the outer cosmos of galaxies and stars, we will need to become a society that encourages, enables and teaches its citizens how to enter altered, or *alternative*, states of consciousness, and how to develop an epistemology and a new kind of science based on what we discover from such deep explorations."†

Agreeing with saints

Something that integrally minded scientists and thinkers quite obviously maintain is complying with spiritual authorities. It seems that what sages and saints‡ delivered all comes in line. These messages make sense in a meaningful way analogously to the inner coherence of the Darwinian vision. For the integralists the avatars of divinity speak of the same subject matter of inner God-realization but each in a different vocabulary and at a different historical setting. Apart from the ever-present arrogant orators most integrally minded scientists submit to the wisdom and morality

* Goswami 1993, 53
† De Quincey 2005, 263
‡ such as Buddha, Plato, Lao-Tzu, Christ, Patanjali, Rudolf Steiner, Yogananda, Ramakrishna, Gandhi, Mohammed etc.

of the founders of great religions. Most importantly: they argue that modern science is starting to point at the same direction.

"If we meditate on the true nature of our self, we shall find, as mystics from many ages and times have found that there is only one consciousness behind all the diversity. Hindus refer to it as the Atman, Christians call it the Holy Spirit or … the inner light. By whatever name it is called, all agree that the experience of this one consciousness is of inestimable value."[*]

4.4 Cosmic evolution

We have dealt with the integral vision of the cosmos as a whole. Nonetheless the integral idea of evolution should be further clarified. Integral evolution does not rebuff but expands the vision of material evolution. The integral mindset sees individual organisms, populations and ecosystems evolving together up to the point where the universe itself evolves. Anthropologist Ananta Kumar Giri[†] for example argues among with a group of biologists for a bergsonian notion of co-evolution emphasizing how individual organisms, species and the whole environment evolve in a constant interrelationship:

"Co-evolution is the crucial challenge here which calls for a new enlightenment and non-duality going beyond the dualism of organism and environment, individual and society."[‡]

This can be interpreted in the following manner. Species struggling for survival is perceived but in a context where a higher (non-locally operating) self-organizative tendency informs the process. Individual struggle takes place but *is not the primary engine of evolution*. Mutations happen but not all of them are random. The overall symphony of the wider (cosmic) ecosystem supports change in a particular direction. While locally independent all populations receive their information pool of mutating possibilities from globally causated pathways of further development.

Any sensitive reader understands that a great deal of mystery shadows such a stupendous experience of life and consciousness travelling within this life. For biological and other material sciences studying evolution this is quite a turn-off. Having neared to the (genetic) keystone of knowing material evolution to its depth they now face a cosmic-scale complexity beyond the grasp of mere objective sciences. As it is, if evolution is both material and in a sense divine, both outer

[*] Goswami 1993, 51
[†] Giri 2008
[‡] Giri 2008, 885

and inner, then the highest methods of comprehending the laws directing evolution are not found merely in the domain of material science which for the integral mind perceives as nothing more than a *sensual extension tool*. It does give plenty of systematic data and theories from the outside. But the categories of the material world break down when the deepest issues of existence are pondered. Complete answers are revealed only in the inner path of spirituality, self-realization of God-quest.

4.5 Integral psychology and social systems

This theme no doubt offers most variety inside the integral camp. Like in other currents of psychological knowing here too we have knowledge highly dependent on the authorities of single commentators. To understand even ostensibly the integral-perennial[*] human philosophy explaining how souls come about and how the cosmic drama unfolds I suggest the reader consult high experts on spiritual wisdom directly. The larger domains can not be satisfactorily described in a frivolous academically determined thesis such as this one. Despite this we give an unsatisfying outline:

Central psychological depiction connecting the integral community is the well-known threefold constitution of man: body, mind and soul[†]. In a nutshell: human being is essentially soul which descends into a mind and further into a body. The real picture is more sophisticated of course.

Idea of the immortality and reincarnation come into play here. Apart from some Buddhist, Christian and transhumanist minorities most integrally minded communities hold fast to the experience of us as God-created, non-material souls who come and go several times. Residing intermittently at higher domains we descend into earthly existence and return once again at death like explained by ancient Indian *sankhya*-philosophy. It seems difficult to overestimate the frequency of reincarnationist outlook. In my experience it is everywhere *but* in materialism and Christianity. I will look into this subject more closely in the last section of this chapter.

So the biological form is a frame or a vehicle for the self-experiencing soul who is a reflection of the larger Self of the infinite originator. In the cosmic drama souls come to earthly existence to

[*] Latin for philosophia perennis: "eternal philosophy" signifies the universal similarities within major traditions of knowledge.
[†] Even if some esotericists suggest a higher count of subtle layers in the human constitution most agree with the threefold basic structure.

play, to adventure and finally to sharpen the latent divine qualities ridding fleshly desires in order to meet perfection (salvation, liberation, infinity) exemplified by great masters.

In the everyday reality the psychological characteristics of men are universal even if people manifest various mixtures of animal, worldly, spiritual and saintly qualities. Such an image puts great emphasis on the differences between human beings: undeveloped "adolescent" people are unable to take advantage of the higher perceptions, self-control and powers which come automatically when higher levels of realization is reached. This notion has evidently caused a great deal of insolence and narcissism at the integral camp dispelling many sensitive individuals and critical thinkers.

In this scheme the psychological wellbeing of man does not depend only on mental coherence, lack of pain, or adjusting to the social or biological ecosystem – and in no way does it depend on luck or coincidence. Instead the more ones consciousness has expanded to tune in with the wider cosmos with its traits of universality and harmony, the more happiness one experiences. Many integralists describe their meeting with Akashic levels as a merging with an ocean of indescribably beautiful never-ending bliss. The higher domains are to them something very real, uplifting and transforming.

According to the central tenets of integral perception the most determining rules of both individual psyche and social systems are coherence and *karma* (the law of cause and effect, or action). Idea of coherence suggests that all thoughts and events vibrate throughout via the Akashic field and therefore a multidimensional conglomeration of interference fields is created in which like resonates with like while pushing away phenomena which do not fit. Represented here we have a sort of magnetic social ecosystem where tensions and collaboration occur according to likes and dislikes. There exists according to integral theory either a repulsive, attractive or neutral magnetic force in-between all phenomena of manifest reality since none are completely separate.

The law of karma even if variously understood in different occasions pictures generally how individual human souls (plus group and national identities) work within this resonating interconnected social ecosystem (within a galactic ecosystem) led by desires according to their past behaviour. Souls are in a sense trapped here. What keeps them bound and suffering is what they desire. What they desire that they seek after. Through the Akashic Field their latent desires – harmonious or destructive – create circumstances which allow the working out of these wants. The

human mind is then a lesser sort of co-creator of the physical cosmos too, not only of the inner realities.

Objective social formations and processes therefore reflect the inner desires – and runaway-effects created by these desires – of conscious human actors who are the main players of the cosmic live-action-role-play. Effectively social life in the integral life-world reflects the spiritual life of its participants. Many integral social cosmologists depict a spiralling historical evolution where Golden and Dark ages wave on according to the level of spiritual development of people.

4.6 Integral medicine

Evidently currents of alternative, complementary and holistic medicine often travel together with integral ideas. Being a mosaic set of practices this does not serve as a shortcut for any nutshell approach to integral medicine. Typically alternative therapies enjoy popularity among integral communities since they tend to share a notion of interconnectedness and thinking in wholes. Sociologically much of this enthusiasm – logical or illogical – derives from the sole fact that these therapies are unconventional like the world view of the integral communities. But they do no always fit the scheme.

Instead of a two-dimensional integral-alternative correlation the essential approach to health in the integral experience commences from mind-over-matter thinking which material medicine terms psychosomatic. The mind controls health of the physical organism – being both nearer to the core self or soul and having capacity to connect to infinitude of levels of reality. Holistic therapies often classify conditions according to the level where the ailment mostly dwells. The causal factors of most dis-eases lie deeper in the mind or soul.

Integral medicine does not claim superiority from material medicine in trauma treatment. The more acute and local a problem, the more reason there is to apply carefully tested methods of material medicine. In more complex cases of long-term health and chronic disease integral medicine bends towards other methods. The overall health of a human being depends firstly on his connection with the divine source of cosmic energy which can – if properly approached – directly heal even serious cases. Most important for practical matters of health is the personal responsibility of all-round sound living which according to integral thinking alone provides both prevention and treatment of all diseases.

According to the integral communities the most all-encompassing reason for sickness is ignorance of the laws of health. This is not a circular statement but means reciprocally that knowledge and right action leads to *natural* healing; that in most cases we are not merely passive spectators of health and sickness. Genetic and environmental factors have of course their share of the local causal impact. But these can be overcome in most situations. They are not primary causal factors but just the arena in which the deeper spiritual struggle of health and sickness takes place.

Further according to integral experience the primary causal factor for sickness is poor will power which results from a restless state of mind. Lack of concentration prevents us from counteracting negative events and influences by taking up necessary healthful action. Without a strong will we do not seek proper sources of healing and valid knowledge. Also a positive and clear state of mind correlates positively with health not just via good choices but in itself. Happiness is a causal factor of health. For the integralists most people simply have not tried hard enough to heal themselves with concentrated intelligent will power, proper behaviour and careful introspection. Lack of patience and perseverance are then seen as central causes for sickness. Our physical bodies obey our minds.

Secondary causes for sickness both physical and psychological according to integral experience are misbehaviour such as overeating, abuse of stimulating substances, over-sexuality, lack of physical and mental exercise, oversleeping and inertia, toxic environment, negative thoughts and emotions, compulsive activity, lack of service to others, lack of rest and overloading the senses.

The demands seem complex but they reflect religious moralities and are apparently followed by many among the integral community who preach them. The claim is that anyone who step by step takes up the proper course of actions and refrains from these harmful actions becomes healthy by law. Good actions to take up according to general integral ideas include following a simple mostly organic diet with little or no meat, routinous physical exercise, light fasting and methodical meditation, working devotedly for the surrounding community, seeking uplifting and harmonious interests and struggling to focus on a state of inner and outer cheerfulness.

The integral idea of healing has a taste of naturality in it. There is a belief that if one applies methods such as listed above there is a deeper almost teleological vibration of wholeness which leads to improving health and strength. In other words people only need to remove the obstacles of

higher health (and overall success) and things happen naturally without forcing. This contradicts the materialist perception which sees the appearance of diseases statistically inevitable. Integralism emphasizes that those who reform themselves swim against this current.

4.7 Integral morality

Morality touches a very deep layer of human experience. In the materialist life-world good and evil are essentially random experiences inside the local psyche since neither intrinsic determination nor non-local connections exist. In a Christian reality God is "pure liquid goodness" but mankind reaps evil since it does not follow the laws of rightfulness designed by Him. It is difficult to say whether any general outline of an integral pronunciation on ethics can be couched. Obviously the latter of the above two resolutions is more akin to the integral experience of good and evil. So let us try once more to hybridize the esoteric with the analytical.

Our description of integral health tells much of integral morality. But deeper questions surface. I claim we arrive here at the paramount frontier where most materialists (oft subconsciously) discard any version of either Christian or integral experience. The mystery here is *teodichea* – the axial problem of evil: What logic explains how a righteous all-powerful Creator lets his children suffer in such formidable ways?

Most other puzzles, I argue, are easily illuminated by anyone with a simple understanding of the limits of the sense-centred scientific protocol and the wonders of our Earth. But this one stands out making it very hard for the materialists to even consider any theist-bent reality since these predicate a morality of such an arranged suffering. *Teodichea* also explains much of the prevalence of atheist Buddhism and other materialist-integralist chimeras: a need to embrace some integral theorems combines with the inability to solve *teodichea*.

We do have a widespread resolution among the integral communities. The problem of evil resolves conjointly with another principal query of metaphysics: the freedom of will. How does this happen?

According to integral spirituality the law of cause and effect works impartially. One who sows good reaps good and vice versa. Individual souls have in their hands the power to guide their action, to become good or evil. Without such a freedom to either discard or embrace the path of goodness human souls would be puppets of the Divine. Disasters, injustice and accidents are essentially

perceived as residual effects of our own past-life mischief. The Creator maintains the impartial law of cause and effect which is like a stone wall: you cannot blame the builder if someone keeps on banging his head against the wall and gets hurt. The original reason for our evil path – the original sin or *maya*, ignorance – is our letting go of the consciousness of unity and beginning to believe in separateness in previous ages of social and individual incarnation. This makes inharmonious desires flourish within human souls and communities.

This resonates very Christian though its cosmic measures and especially the law of reincarnation stressing our own life-after-another effort to fight desires and seek divinity are hardly accepted by other than marginal streams of universal and Gnostic Christians.

Good is seen phenomenologically without any philosophical complications: good is simply that which produces good effects and contributes to the removal of suffering (by adding to the harmony, beauty and wisdom of the whole). This way good also equals with that which comes from the Source since these are its qualities – evil is but a contrast to draw infinity into finite forms. In Vedic terms: cosmic delusion hoaxes people to mistake that what immediately feels good necessarily brings good results. Our mission is to rid such mirages, apply discernment and perform that which results in good. This way our souls can unite with the Everlasting Goodness.

4.8 Scientific religion

Not all integral communities and individuals behave very scientifically even if some do. Partial solutions, dogmatism and wishful thinking frequently cloud the core of scientific spirituality. The materialist ensemble in my view behaves reasonably in resisting dilettantes who claim access to higher knowledge but cannot logically discriminate, progress and integrate their experiences. Most often ones who speak do not know and who knows does not speak. One of the most intriguing and rational of solutions is offered by Self-Realization Fellowship / Yogoda Satsanga Society transmitting the spiritual legacy of Indian yogi Paramahansa Yogananda[*]. SRF president Sri Daya Mata (1914-) explains:

"Material scientists have their finely honed instruments to explore the farthest parts of outer space and the minutest atom. They do not employ these instruments haphazardly, or they would accomplish very little. Similarly, you have wondrous instruments of … scientific techniques of

[*] And other lines of teachers who share the same source of scientific principles, originated by Indian Yogi Lahiri Mahasaya in the 19th century.

meditation with which to explore the inner world with its mystical portals what open to the kingdom of God."*

"Meditation is the scientific way to gain perception of the inner divine kingdom. That perception comes as we refocus our consciousness, turning it within, away from the finite world and the body, by withdrawing our mind and life force from the five senses. Like scientists who peer with diligence and concentration through a powerful microscope or telescope, with that same seriousness and enthusiasm and ever-increasing desire we must penetrate our attention deeper within in meditation, again and again and again. Just as the discoveries of any scientist can be duplicated by any other who approaches the subject with the same systematic methods and dedication, there is not one of us sitting here who would not experience the beauty, the infinite joy, the infinite love, the infinite awareness of the One God … by deep, devoted practice of scientific meditation."†

A systematic approach to religion such as this one is novel in history of knowledge. Acclaimedly the scientific techniques (called *kriya yoga*) are ancient but have not been brought public before. While seemingly just another spiritual (integral) tradition among many affirming the universal of "One God, One Religion", the promise of *kriya yoga* is of high priority for both scientists and spiritual seekers. In my opinion this promise is what makes the integral experience scientifically valid. If there is an unfailing method of realizing the integral vision then we have at least one horizon of closing this discussion. We have the telescope and the equations.

4.9 Christianity and the integral experience

Before conclusions it is useful to consider the third major force of modern history of knowledge: popular Christianity. We term popular since there are so many branches of Christian reality. This is not to dismiss the importance of say Judaism and Islam as powerful currents. The example of Christian creationism or fundamentalism serves as a hint as to how various other modes of religious experience fit in to the scheme presented here.

There is an infamous opposition between Darwinian natural science and Christian creationism. The latter emphasizes the superiority of the Bible as a measure of truth and opposes the random evolution theorem of Darwinism which denies most of religious sentiments like analyzed above. The creationist communities present analogous arguments with integral science to downplay the materialist reality‡. Term intelligent design or ID is sometimes applied for a biblical version of

* Sri Daya Mata 2006, 25
† Sri Daya Mata 2006, 22
‡ In Finland Tapio Puolimatka (2008) has written a highly detailed epistemological commentary revealing the shortcomings of material science's deep assumptions analogically with many integral presentations. However he makes no comment on integral science and resides in the biblical reality.

science. Seen from the direction of integral experience there is another impenetrable membrane of dogma surrounding Christian ID or creationism: it can not be adjusted to integral experience without stepping out of Christian mainstream. The majority of Christians do not accept reincarnation which is imperative in the integral experience. In the Christian reality no logical resolution is given to *teodichea* except from "God only knows". Also Christians tend to refuse the integral concept affirming a universal core deep within all religions.

These two positions – anti-reincarnation and "our religion only" – make popular Christianity rather hostile for integral communities. It becomes a non-moving bystander in the mutually evolving currents discussed here. It seems plausible that the accelerating interweaving of global cultural forms will tempt more and more Christians to consider the realities of foreign religions and integral themes. It is a matter of another study on sociology of knowledge to witness how Christianity maintains its dogmas against the progress of both science and integral universality – and to what extent has the integral vision gained ground within Christian populations.

To be exact we should say the third ideological current is dogmatic religion, not just Christianity. For a long time materialism has scorned Christian theology and other dogmatic belief systems since they refrain from analytical communication and wish to keep their doctrine shut from all update. A return effect now unfolds as a scientifically sound version of theism has begun magnetically streaming back against the high walls of the atheist fortress – back towards the source of scientific advancement. Dogmatic belief has shut itself, paralyzed, to a retreating pack of fundamentalists. Integral science receives support from the core traditions of all religions and faiths plus cutting-edge science. Therefore it challenges dogmatic religion even more than it does material science.

Chapter 5: Comparing the two life-worlds

Introduction

In the closing chapters the two reality-experiences are studied together and inserted into the larger terrain of history. Lastly an account is presented of the global horizon of accelerating change.

5.1 The uneasy truce

For the materialists religion and philosophical discourses are emergent phenomena taking place inside the material evolution narrative. Spiritual experience is based on psychological hoaxes, erroneous reasoning, hallucinations, and wishful thinking. There is no reality of divine beings, astral worlds or any transcendental creative agent. For the integralists material science is the pitfall of delusion where people have lost their contact with the ever-present divinity manifesting wherever one seriously looks for it. Similarly they have lost from sight the subtle interweavings of reality manifesting as non-local events. There is no magic in the integral cosmos since miracles happen all the time.

For the materialists human experience arises by accident in a hostile cosmos. Trapped inside a carnal frame it travels awhile but finds no lasting solace. In the end subjectivity simply dissolves. Human beings are evolved animals but no more than that. For the integralists humans are divine and immortal. Sent here to suffer and enjoy for a hidden metaphysical cause; to find the Source and regain our infinitude. We travel temporarily inside animal bodies but our capacities are unlimited. In the end we find that life and death, pleasure and pain were but a dream.

The materialist future studies prescribe a struggle for species and individual survival against the powerful forces of cosmic coincidences and core human selfishness. Assuming mankind keeps seeking pleasure and fulfilment in technologically powered expansion most atheist futurisms envision digital hyperrealities, technological prolonging of life span, artificial intelligence, human-machine interweaving, pain-removal through the evolution of medicine and settlement of outer space.

Not necessarily opposing any of these the integral futurists are still looking at a different landscape. With a solid impression of realism they work to create a future of voluntary simplicity, compassion and self-control via global spiritual awakening and building sustainable economies resonating with natural harmonies. Instead of mere outer expansion a paradigm of inner growth seeks to expand the scope of reality available to human beings through spiritual methods. Integral futures emphasize learning first to see beauty in everything and only then cautiously acting to change things. For them a limitless inner cosmos waits to be explored.

The material and integral are by no means enemies at every phase of human enquiry. As thinking individuals we necessarily share impressions from both camps since both harbour a blind spot for their anti-thesis: materialism in admitting its silence when it comes to ethics and subjectivity, integralism in stressing that we are *also* material beings. But as historical currents of knowing and experiencing they represent two opposites which can not rationally coexist in one individual or community very long.

5.2 Approaching the paradigm war

We have introduced the duality of scientific reality-experiences and discussed a version of phenomenological sociology of knowledge. We are standing at the magnetic membrane between two scientific modes of experiencing reality: one stabilized as a metaphysically ordered metaparadigm and an expanded metaparadigm still in the process of settling down.

Resistance can be difficult to distinguish from reasonable scepticism. In the everyday life-world human beings strive towards wholeness and coherence. Psychoanalysis for example has witnessed a variety of methods protecting our inner self against the threats of contradiction. As we become acquainted with the dominant metaphysical paradigm of our surrounding society a subtle conditioning begins to determine which experiences we regard real and which we refuse to integrate. This way we grow very concretely inside the mental fabric of our society. We have few essentially personal thoughts or emotions. Psychology also evidences that much of mental well-being is tied to the extent to which our inner experiences are verified by our surrounding community.

Primordial horror often arises as unfitting experiences take place in the screen of our experience. To actually taste a qualitatively different scientific reality requires a phase of painful, highly personal

and indescribable inner turmoil. The proponents of integral theory confirm this resistance in their personal lives and in meeting the responses of mainstream colleagues. To defeat the magnetic pull towards the mainstream requires a concentrated escape velocity which must logically be preceded by an inner desire to overpower this homely metaphysical gravity. This inner devotion can only be nurtured by the person himself. Without a healthy scepticism – towards both alien and one's own thinking – combined with scientific openness no progress is made.

All scientific protocols are designed, executed, evaluated and put into context by the original measuring device: human experience. Our situation now verily reminds of the Catholic Church in the 16th and 17th centuries and beyond. New realizations were offered together with theoretical systems and methods of empirical confirmation. Eminent people however refused to gaze into the telescope and study the elementary equations of new astronomy. They had no desire to apply new protocols to their experience. The resistance was too strong. They had no desire to expand their knowing and change their experience of reality.

Like then we now have new methods and scientific protocols and a variety of integral theoretical frameworks that brings these together. Scientists are asked if they wish to gaze into the telescope of integral experience to see if they can confirm or falsify what others have realized. The most general procedure of experimentation is meditation and other spiritual practice. It is claimed that with concentrated effort anyone can personally experience the truths incorporated by integral experience.

The problem has been that spiritual practice in considered everything but scientific. Here we find a core weakness of Laszlo's I-TOE and some other versions of integral thought. They claim intellectual completeness but give few specific suggestions in tuning in. Often these traditions simply state that it is possible to lift one's mind at the realm of an expanded understanding but give no scientific procedures to perform such a feat *without fail*. Fortunately the emergence of *kriya yoga* and other logically advancing spiritual methods complement this lack since along with testable spiritual laws they share *de facto* neurophysiologic explanations of the subtle fabrications of the soul-mind-body interface.

Conclusions: Situating the observer

Central argument presented in this thesis suggests that we might be witnessing a de-westernization of the scientific grand narrative. Should integral science gain integrity and stand the counter-attacks of materialism we are not far from the situation where standard academic education presents material science subordinate to more inclusive integral knowledge. In any case the expansion, intermixing and fragmentation of knowledge require from all observers the skill of critical distancing and careful introspection.

To perceive the whole of affairs we need to observe how the currents of knowledge are embedded in the larger terrain of historical unfolding. Undoubtedly we are facing turbulent times as the maturating tidal wave of conjoint population growth, ecological degradation, techno-cultural expansion, infrastructure-sensitivitization[*], mental fragmentation and social injustice hits the shore. According to Ervin Laszlo we have entered a phase of instability so decisive that our global organization of human-ecosystem interdependence can not maintain itself. It either breaks down or metamorphoses into a higher level of organization.[†]

Effectively the disagreeing (scientific) realities meet in combat at a peculiar moment in history. As the urgent state of affairs becomes visible to a growing number of communities and observers each of them quite naturally sharpens up and presents their version of cause and solution for the pandemonium. Furthermore they all commend action according to their world view:

The materialist communities battle the deepening ecological, economical and political devastation along with their internal activist counter-forces who resist the short-sightedness, technical rationality and pure greed concentrated in market economies. Christians seem unequivocal in their perception of a nearing "End of Days" together with a non-christian family of Armageddon enthusiasts affirming some massive cataclysm in 2012 or soon afterwards. Conspiracy theorists await either the grand hoax or the disclosure of their knowledge. Zealous new age neophytes hope for a full global awakening of peace and harmony. All in all many people feel that now is the time to start solving whatever deep problems they perceive. It takes no prophet to extrapolate we are

[*] Signifying the growing complexities, demands and interrelationships of modern societies which have – while installing methods of controlling the uncertainties of human existence by legal, bureaucratical and technological improvements – paradoxically become very sensitive to even minor disturbances.
[†] Laszlo 2006

heading towards great noise as people demand change and simultaneously many think they know how to execute this change since the dominant institutions of power face a horizon which they are not built to cope with. Times are again ripe for mass movements and charismatic leadership, be it despotism or moralist reformation.

Science becomes of high importance as it builds on doubt, communication and calmness. But to reach valid understanding of what is happening our scientific ensemble needs to face its own roots and reassess the deep issues of metaphysics and objectivity in the face of integral experience and new scientific data. To mature means to struggle. To solve outer problems of disorder we must first solve inner problems of coherence. This demand also concerns integral theory. They have not to date presented any unequivocal presentation of new scientific understanding. Without a core teaching no new paradigm can settle down.

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