

Method/beyond-method: the demands, challenges and excitements of scholarly information work

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When we think of information science as an inter-science, and when the philosophy of information is reflected upon in a-critical terms, what emerges is a formidable and extremely exciting subject field filled with dynamic dimensions that invoke comprehensive promises of novel inventions that can take not only the subject field as such, but also the workers in this subject field, to new heights of insight and celebration. This requires sensible and thoughtful methodological commitments to come to terms, in a scholarly way, with the challenges and demands of a complex field in order to reach the promised excitements. Ample illustrations of the 'dizzy' and 'fussy' field of information and knowledge in its full complexity are discussed in terms of the work of three scholars in Information Science. The comprehensive research on language, philosophy and information by David Blair (2006), the thorough research on the deflation of information by Bernd Frohmann (2004), and the equally substantial work done by Rainer Kuhlen (2004) on information ethics as it relates to knowledge ecology, will be focused on in order to demonstrate to what extent they take us beyond the current methods used in the field, albeit not far enough. The work done by Edgar Morin and Michel Serres will be used to show to what extent we can indeed move much further beyond the regular methodological strategies towards other, more thoughtful methodological approaches for responsible, exciting and truly inventive research.

Keywords: beyond-method, language and meaning, deflating information, information ethics and knowledge ecology, noology

I Introduction: the essence and necessity of scholarly engagement

When we think of information science as an inter-science (De Beer 2005), and when the philosophy of information is reflected upon in a-critical terms (De Beer 2007), what emerges is a formidable and extremely exciting subject field filled with dynamic dimensions that invoke comprehensive promises of novel inventions that can take not only the subject field as such, but also the workers in this subject field, to new heights of insight and celebration.

It requires sensible and thoughtful methodological renewals and commitments to come to terms, in a scholarly way, with the challenges and demands of a complex field in order to reach the promised excitements. "A scholarly way" is the only way that can possibly comply with the challenges and demands pertaining to such an endeavour, since this intellectual disposition assumes the qualities required for these challenges, and that is the case despite the fact that scholarly work is nowadays in total discredit.

Why is it that scholarly work is so highly recommended, contrary to the views of many distinguished researchers and intellectuals? (see Foster (2005) on Bourdieu's critique of scholarly reason). Its characteristics, as identified and described over a very long period of time by many thinkers, speak for themselves. A brief summary should suffice and will hopefully give some foretaste of what exciting possibilities it might offer (see also De Beer 2003). Scholarly work is a work of thought. Gilles Deleuze (1983:104) writes: "Everything depends on the value and sense of what we think. We always have the truths we deserve as a function of the sense of what we conceive, of the value of what we believe." In other words, scholarly work goes beyond disciplinary boundaries, is not bound by it or limited to it. It draws lines to other disciplines, establishes connections, and makes contributions to the field of knowledge as such, transcends demarcations, and searches inexhaustibly for the ultimate in knowledge. The scholar always searches for more, is never satisfied with the minimum or with what is considered to be enough or sufficient, or not too difficult, or with what belongs to any particular subject field. For the true scholar the issues mentioned would represent the bare minimum.

Furthermore, it embraces what can be called a movement beyond method. It takes method and its usefulness for what it is, namely a made and constructed road, but accepts at the same time that the truly beautiful scenes cannot always and sometimes can never be seen from the road. It realises how much science has to do with chance and not only with necessity (Monod 1979). It also reminds us of Gadamer's idea of "the infinite of the unsaid" (1977), or of "the unpredictable and unforeseen" of the mathematician Ekeland (1988), or of the crystal-like firmness and hardness on the one hand and the smokiness and vagueness of reality on the other according to the biologist Henri Atlan (1986).

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As an answer to the question about what really makes a scholar, Gadamer (1977:12) writes:

That he has learned the methods? There is such a thing as methodological sterility, that is, the application of method to something not really worth knowing, to something that has not been made an object of investigation on the basis of a genuine question. It is imagination (*Phantasie*) that is the decisive function of the scholar. In this regard methods in science are paying dearly for their own progress – they sacrifice one of the most fruitful and creative human activities – imagination.

Added to this:

the scholar is the person who knows how to apply theory in the true sense of the term, namely to look attentively on the outward appearance wherein what is present becomes visible and, through such sight – seeing – to linger with what shows itself. In such a way knowledge becomes possible and theory helps us to understand. The scholar is, in other words, also the visionary. Understanding calls for a special strategy which must be seen as a spiritual exercise aiming to obtain ... a true transformation of the view we take of others [of objects, things] in the ordinary circumstances of life. The welcoming disposition ... the capacity to take her [the thing or object] just as she is, in her distinctive necessity, is a sort of *intellectual love*: a gaze which consents to necessity in the manner of the “intellectual love of God”, that is to say, of the natural order, which Spinoza held to be the supreme form of knowledge (Bourdieu 1996:24).

One of the fundamental tasks of the scholar is reflection, that is, thinking about the quality of my knowledge, the depth of my understanding, the clarity of my vision, and thinking about the obstacles in my way to knowledge constructed by my assumptions, prejudices and presuppositions, and my personal preferences and ideological blindfoldedness. The next section will certainly demonstrate why scholarly abilities are required and highly necessary, especially when one wants to move into the realm of the beyond-method.

2 The complexity of the field of the research endeavours

Ample illustrations of the ‘dizzy’ and ‘fussy’ field of information and knowledge in its full complexity can be found in the themes researched by at least three renowned scholars in our field as reflected in some of their recent publications. The choice of scholars is a random one; there are many more. They are not the only ones working, with immense impact, in our field. But all three of these scholars, one from Canada, one from the United States and one from Germany, are at least working at the heart of our subject field.

In other words, by using them to illustrate my point and to support my argument, I am trying to be truthful to what happens in Information Science and Information work. I am for this very reason certainly not completely out of order. What their works especially called for is a unique and very enthused notion of thought that excites and takes us forward in so many respects, but this thought must be reflected in our methodological endeavours as well, and not only in our appreciation of the richness and vastness of our field.

Their exploratory work and research endeavours have at least three major focuses relevant to the perspective of this paper, namely the subject field of Information Science; adequate methodological considerations suitable for the field as it emerges through their endeavours; and the excitement of fresh and new findings as the result of their energetic scholarly work. Their insights, findings and proposals will enable us to reassess and reinvent parts of our subject field, or at least make us aware of the vastness and interdisciplinary nature of this field.

2.1 The research on the deflation of information by Bernd Frohmann (2004)

This study deals with information as reified abstract object that must be revised for scientific information to be communicated in a significant but also useful way. Frohmann (2004:8) states that “under the spell of thought, representation, ideas, conceptual networks, propositions, and conceptions of scientific work as primarily a highly abstract and theoretically oriented cognitive activity, and under the assumption that the pace of contemporary scientific work requires speeds of information transfer impossible to attain through the refereeing systems and print medium of the journal literature, information studies seeks other channels for the communication of scientific information”. In order to achieve these alternative channels we should move away from ‘the abstract idea of information’ based on ‘the conception of information as a particular kind of substance’ implied by the above statement.

This work by Frohmann is not a solitary and isolated endeavour, as the study clearly demonstrates, and it is also not the first of its kind although not necessarily in the context of Information Science. In two consecutive publications (Gibbons *et al.*, 1994; Nowotny *et al.*, 2001) the same problems have been addressed and similar critical comments have been made on scientific knowledge in general, including in a very specific way, of course, the natural sciences. Specific attention has been given to ‘the absence of, or the emptiness of its epistemological core’ (Nowotny *et al.*, 2001: 179-200). But even more than a decade earlier Ian Hacking (1981) edited a fine booklet on “scientific revolutions” – which can

to a great extent be seen as a tribute to the well-known Thomas Kuhn – in which the idea of ‘the pure knowledge of the sciences’ is questioned.

What is encountered in Frohmann’s study is a thorough and, according to many, a highly suspicious questioning of the accepted (very often in a highly uncritical way) notions in Information Science and works that are accepted as standard notions without which the activity of the science cannot proceed. Notions such as information, communication, knowledge, representation, transfer, theory, practice and many others are taken for granted and are accepted as the foundations of this science. In their substantialised form they contribute to an idealisation of science and scientific knowledge. In this context, key roles are assigned to information seeking, information processing and to the communication of information.

Frohmann finds the motivation for his critical strategy particularly in the sociology of science. It is well-known to what extent certain sociologists of science have studied extensively the work of scientists and especially science-in-progress in their explorations of how scientific facts are constructed. *Laboratory life* by Latour and Woolgar (1986) is a prime example and one of the most influential in this regard, but there are certainly many more examples.

The heart of the matter is that questioning the core concepts or notions implies questioning the very landscape of Information Science as described by these notions. It means that the landscape is shifted or even turned upside down. The field looks different and calls for a different way of dealing with the field. Central activities in the field are at issue, namely information retrieval, information processing, the communication and transfer of information, the essential understanding of information itself, record studies and documentation, indexing and classification.

Although it is always difficult and risky to take things for granted, one fundamental implication of this questioning is that everything that has been taken for granted in the field needs to be rethought, and therefore also redefined and redescribed, even in cases of defending and justifying and reconfirming the *status quo*. Moreover, the way the questioning is pursued implies that the demarcation of the field has been shifted and widened to a great extent. The challenges posed to information scientists and information workers are multiplied. Although it was never a straightforward matter, it is in view of these developments, if accepted, even less so.

It is by no means a matter of criticism for the sake of criticism. It is driven by the conviction that the scientific endeavours of a specific science are forced into dead-end streets because of the uncritical and consequently unwise acceptance of notions and strategies as fixed and final while overwhelming evidence to the contrary exists. The significant role of personal convictions, ideological inputs, prejudices and assumptions in establishing what science is and what constitutes a scientific fact are totally underplayed if not altogether ignored.

It is clear that research of this nature into the effectiveness and significance of scientific information transfer and communication requires investigation of a very subtle and complex nature, which will be attended to in Section 3.

2.2 The research on language, philosophy and information by David Blair (2006)

There could never have been any doubt about the central importance of language in the context of Information Science and the activities related to it. Although it is so important, the attention given to language remains extremely limited, and even nonexistent in most instances. It has hardly formed a specific domain of investigation and exploration – another significant entity that has been taken for granted. All of us know exactly what language means, what it is, what it is used for and how it is used. The coming and increase in importance of semantics, semiotics and linguistics raised a few eyebrows but hardly more than that. The fashionable soon disappears. Even the efforts of Kuhlen (1986) with his enthusiastic study of Information Linguistics did not last very long and despite its significant insights and usefulness did not find ample support.

Blair proposes an answer to the question why issues of language and meaning are important to the study of information. When information is described we must mean something by the description. Any study of information, dissemination of or requests for information must be placed within the complex study of language and meaning (Blair 2003). Any request for information must be posited within the study of language and meaning. No information scientist and no knowledge and information worker can afford not to attend to the question of the central importance of language. Statements like these immediately and quite obviously show why philosophy should be involved as well. For this reason, Blair (2006:2) poses the questions: Why language? – Why philosophy? – Why Wittgenstein?

Wittgenstein is of course one of the most influential if not *the* most influential philosophers of language of the twentieth century. In order to assess his value we have to acquaint ourselves with other philosophies of language as well. This is simply to emphasise why it is only the scholar who can cope with the demands.

According to Blair, anyone who accepts the importance of language in an information context should diligently attend to the significant views of Wittgenstein on language. We will highlight a few of the most significant of these insights as identified by him. He states that we have to be selective about what to take from philosophy of language for our own

work, because some aspects are helpful and others not. In order to distinguish, however, we have to develop an understanding of the full scope of both language and our subject field (Blair 2006:4).

The first point to be made is that Blair takes “the approach of the philosophy of language to be the fundamental examination of the issues of meaning”. It would be difficult to argue against the assumption that only meaningful information forms the heart of information science and work. In this regard the relationship between language and truth should not be disregarded since it is of vital importance although totally neglected.

There are clearly two different views of the meaning of language that have been developed and discussed extensively by linguists and philosophers over a long period: the logical formalistic approach or the abstract approach to language, on the one hand, and the dynamics of ordinary language, also referred to as the material aspect of language on the other. Depending on one’s approach, the outcomes and applicability will be determined. The first is a very obvious reductionist approach but it has proved to be valuable and useful in many situations although it remains an impoverished view. The second approach is much more uncertain and contains risky elements because it refuses to accept any form of reductionism and prefers to give account of the full spectrum of the real.

This problem is well-illustrated by Wittgenstein’s philosophy of language. One of the most central issues of concern for him is “the determinacy of sense” which refers to the precision by which meaning can be defined. Gottlob Frege and Bertrand Russell believed that ordinary language (the material aspects of language) was not precise enough to represent the complexity and subtleties of meaning; we have to clarify in clear and unambiguous terms what we say about the world (in terms of the abstract aspects of language). The model for this approach would be the rigour of scientific method. What is needed then is a logical language that could faithfully model these complexities and subtleties of expression and that could be used to clarify whether statements of facts were true or false. This language could uncover the underlying logic of language so that language can be made more precise through the use of formal logic. Such logically perfect language is a language which “has rules of syntax which prevent nonsense, and has single symbols which always have a definite and unique meaning” (See Blair 2006:4-5). This is of course a highly reductionist perspective on language, complying with the earlier mentioned abstract notion of language.

Initially Wittgenstein was sympathetic towards this view. As his thought matured, he began to have serious misgivings about the ability of logic to model or represent the complex and subtle statements of language.

Not only was logic inadequate to this task, he thought; ordinary language itself was, if used properly, the best possible medium for linguistic expression, philosophical or otherwise. In short, Wittgenstein’s thought evolved from a belief that problems of meaning in language could be clarified by logically analytic methods to a realisation that many of the unclarities of language were a result of removing statements from the context, practices and circumstances in which they were commonly used – what Wittgenstein called our ‘Forms of Life’. What determined the truth or meaning of a statement was not some underlying logic, but how the statement was used and what circumstances it was used in. Ambiguities in language are clarified not by logical analysis, but by looking at how the words or phrases in question are used in our daily activities and practices (Blair 2006:5).

The full scene of linguistic dimensions as sketched by Wittgenstein and developed by Blair for our scientific endeavours relates to notions such as language as city, language as labyrinth, language games and the founding of language in forms of life. Information must be differentiated in a similar way.

These two perspectives are decisive in deciding about “the determinacy of sense”, especially in so far as determinacy of sense is central not only to language but also to all information-related work. Wittgenstein’s view of language is important for information-related activities, for example the study of information systems.

Our current most widespread model of information systems is the computer model, in particular, the ‘data model’ of information. This has been a very successful and robust model that has had a remarkably long history of implementation. Computers are, in a fundamental sense, logical machines, so that we might say that the current most popular model for information systems is the *logical model*. This logical model ... has worked well for providing access to the precise, highly determinate content of our data bases ... But as more and more of our information is being managed by computerised systems we find that we must provide access to less determinate information, like ‘intellectual content’ of written text, images and audio-recordings ... These kinds of access are not as well served by the logical data model of information ... Current information systems are in some way victims of the success of the more determinate data model of information. ... The data/logical model cannot always capture the subtleties of language necessary for the retrieval of precise intellectual content on large information systems. ... As long as we believe that the precision of representation for data retrieval is possible *for all information systems*, we will run the risk of building ... dysfunctional systems – systems insensitive to the subtleties of language (Blair 2006: 5, 6, 7).

While pondering the significance of the above-mentioned insights, it is important to realise how poor the scientist/worker who has no understanding of these dynamic aspects of language is. And again, let us not fool ourselves by claiming that we know in any case what language means, since such ignorance paves the way to stupidity, one of the sicknesses of our time, to sterility, and in the last analysis to fundamental boredom. At the same time, in a more positive sense, these considerations help us to assess the landscape of the information sciences not only in terms of its magnificent scope but also in terms of its significant positioning in the full spectrum of the sciences and scientific work – indeed a key position. The methodological challenges posed by these insights are formidable. How to cope and deal with the abstract dimensions of language is fairly straightforward. How to cope and deal with the material aspects of language is immensely problematic and difficult and cannot be allowed to escape the attention of information scientists and information workers. Instead of looking for an underlying logic of language, as Russell suggested, we need to look at how language is actually used, for it is not an underlying logic that clarifies what we mean, it's the context, activities and practices in which we use language that provide the fundamental clarification of meaning we are looking for. The methodological implications for user studies, readership and writing stand to reason and will be explored further in Section 3.

2.3 The thorough and fundamental study of information ethics by Rainer Kuhlen (2004a)

This study does not afford us any room to relax. Kuhlen's research emphasises once more how complex and dynamic our field of study really is. Nothing is simple, and the simple is always the simplified. The way he links information ethics to philosophical ethics, to the ecology of knowledges and the link between knowledge ecology and information ethics, to freedom of communication, to questions of the digital divide and the encounter with knowledge and information in the electronic space, to problems of privacy, and to the central question of to whom knowledge and information really belong (Is this ownership a public or a private matter?), illustrates very significantly the nature of the complex and interdisciplinary dimensions of our subject field that calls for special investigative and thoughtful strategies and approaches.

The series of questions posed by him in the study shows in a pertinent way to what extent information ethics cannot and should never be seen as an isolated issue, isolated from ethics proper and isolated from the ecology of knowledge. The assumption is of course a thorough and comprehensive understanding of both by information scientists and information workers. By approaching the theme in this way, Kuhlen clearly identifies a number of issues that should be, in a general sense, attended to by the information scientist and information worker. Once this disposition becomes the standard practice, information ethics becomes a very natural and significant part of the core of activities belonging to the field. Ethical issues are interwoven with information and knowledge issues; see also his latest book, *Ethics and property rights* (2007).

If it is true that Information Ethics cannot be understood without careful attention to ethics and to knowledge ecology, it is equally important that these fields of study and especially the relevant themes emerging from both these fields require serious attention. Information ethics will simply not be intelligible without these contexts and may amount to nothing but insignificant and powerless sets of rules and codes that appeal to nobody. In order to respond intelligently to the demands of information ethics, the pertinent questions posed by Kuhlen should be responded to. In view of the demanding and challenging nature of these issues, Kuhlen suggests specific methodological focuses that will be addressed in Section 3.

3 Methodological demands and challenges and a situation beyond method

The unconditional requirement for understanding, investigating and reflecting on such a diverse and complex field is the adoption of an unusual methodological approach, since the standard and generally accepted approach is rather sterile, inadequate, unimaginative and even naive given the dynamic field in which it should be applied. The inter-scientific dimensions of this field of study are so rich and complex, and the a-critical dimensions so manifold and dynamic, that no single method or number of methods in the ordinary sense will ever suffice. The dynamics of this field lie beyond these methods and their strategies and competencies and beyond critique and criticism as it complies with these methods. It calls for a situation of beyond-method, for journeys off the beaten track.

The three researchers have demonstrated in extremely able and competent ways how a situation beyond method is not only necessary but the only feasible approach in the light of their exploratory work. Each one links his own considerations of the field to appropriate and effective ways of dealing with the happenings in this field as articulated by each.

When we have to deal with deflated information and its alternatives, the scope for exploration expands immensely. The traditional methodological approaches are inadequate and simply not suitable to respond to this situation. (See Frohmann 1994 for an exploration of discourse analysis as an alternative methodological approach.) In a later publication

he again touches on the problem of method when he writes: “Discourse analysis presents information studies with an opportunity to revisit and refresh its historical interest in documents. It also connects with documentalism’s historical insistence on the social spaces that documents help constitute and maintain. The method’s focus on the institutional practices governing the production, organisation, circulation and availability of documents engages with a far wider range of social practices than is usually considered by the field’s emphasis – an equally traditional emphasis – on the performance and efficiency of information systems. It also provides a neglected social context for studies concerned primarily with the satisfaction of individual information needs. The resources it makes available – the conditions of the existence of statements, the practices with them and their stability – widens the field’s pedagogical and research opportunities” (Frohmann 2001). In his book Frohmann pleads for a multiple approach and practises it as well. One of his aims with strong methodological implications is to show “how rich and varied the practices with scientific documents can be, especially compared to the simplistic idea that there is no more to the informativeness of a document than what happens in the mind of someone who understands it”. (Frohmann 2004:16).

In our dealings with language as major characteristic of the subject field, Blair is explicit about suitable methodological strategies equipped for the challenges posed by the presence of language and meaning at the heart of our subject field. What is called for is an explicit anti-reductionistic approach or, in the words of Latour, a strategy of irreduction, the disciplined and determined refusal to reduce at all cost. A core methodological invention may be linked up with this strategy against reductionism when he writes: “If the indefiniteness of words or expressions is resolved by a consideration of their context or circumstances of occurrence, then it is no great intellectual leap to see that the indefiniteness of the language of representation and searching used by information systems might be resolved in a similar manner. This means that information systems are not context free but are situated in an important and essential way. They are influenced by the context and circumstances of their use; in particular they must be considered part of the common activities and practices in which they are used, and an understanding of these activities and practices may be necessary for the full potential of an information system to be exploited” (Blair 2006:23-24). Part III of his book contains a detailed discussion of this point. Blair remarks on pages 12 and 13 on language, thinking, needs articulation and the determination of the usefulness of the information: it is stated that we live in language the same way we live in our cities. Language offers us many alternative ways to say the same thing (see pp 14-15). It reminds one of the familiar statement by Martin Heidegger that language is “the house of being”.

The ecology of knowledge that features as the basis for information ethics poses its own methodological challenges that can in no way be accommodated by traditional textbook recipes for methods. The dynamics are such that thought of a very special capacity becomes a major substance for the method to be applied, especially to effect the transition from an ecology of knowledge to an information ethics. With regard to ethical subjectivism and cultural relativism he devotes a substantial paragraph in his book to the methodical handling of matters of information ethics: the descriptive, normative, meta-theoretical, discourse-theoretical handling is addressed (Kuhlen 2004a:37-42). From his reflection on ethical theories it becomes clear that the questions posed by information ethics are the fundamental questions of ethics as such: How do we want to live? How do we want our children and their children to live? In what does humanness consist? In what consists a just, a sustainable societal organisation? What are good, correct, perhaps even fair relationships? These are questions information scientists are called upon to respond to.

It is clear that the methodological moves made by our examples take us far beyond the traditional route and put us strongly on the route of a position beyond-method. Despite their radical re-description of our methodological alternatives it still seems as if it is not radical enough, in the sense that they manage to really take us beyond method, but even more: that they do not manage to take us far enough into the domain of real excitement and invention. For that we need much more, although this more is not at all unrelated to their insights and contributions. Traces in this direction are clearly identifiable but not adequately explored. Some remarkable studies on this theme of methodological alternatives have been published. In this paper only three examples will be emphasised.

Edgar Morin’s guidance in this respect of a beyond-method, as worked out in the series of publications with the title *La Méthode* (6 volumes), is crucial. He states firmly:

We are in need of a method of knowledge that translates the complexity of the real, recognises the existence of beings, and approaches the mystery of things. ... The method of complexity demands the conceptualisation of the relationship between order/disorder/organisation; the refusal to reduce phenomena to their constitutive elements neither to isolate them from their environments; the rejection of the dissociation of the problem of the knowledge of nature from the nature of knowledge (Morin 1977: 3-4).

This, he says, is “the voyage to the search for a mode of thought that would respect the multi-dimensionality, the richness, the mystery of the real and that would know that the cerebral, cultural, social and historical determinations that subject all thought co-determine the objects of knowledge. This is what I call complex thinking” (Morin 1980:10). It is

according to him self-evident that a rejection of these 'a-methodical' approaches would lead to "a pathology of knowledge that materialises in the increase of ignorance and in the mutilation of knowledge" (Morin 1986:13-14). Equally crucial is his work on paradigm, especially his focus on "the science of the knowing mind, or noology" that is capable of dealing with the paradigmatic knot as the space or place where "the multi-determined character of knowledge finds expression which has its determinations in the individual, anthropological, noological, socio-cultural and psychoanalytical structures of the knowing mind" (Morin 1983:11-12).

Of similar importance is the work of Michel Serres. These thinkers are both adamant about the shortcomings of traditional methodological approaches. Serres (1995:136) writes: "We have at our disposal tools, notions, and efficacy, in great number; we lack on the other hand, an intellectual sphere free of all relations of dominance. Many truths, very little goodness. A thousand certainties, rare moments of invention." Compare in this regard also his remarks on method when he states that repeating a method is profoundly boring and nothing but a kind of laziness (*ibid.*:100). Hence their keenness to propose other more thoughtful and inventive methodological avenues to be explored for responsible research.

Their approaches are not far removed from the ideas of Paul Feyerabend, as these ideas are proposed and worked out in his book *Against method* (1977). Here we are confronted with a really anarchistic perspective on methodological issues. Paraphrasing two remarks by him would clearly suggest the direction to be taken. He is emphatic that insistence on the rules of method would certainly not have improved matters, but would much rather have arrested progress (Feyerabend 1985:13). He emphasises as well that case studies have shown that a blunt application of "rational procedures" would not have given us a better science, or a better world, but nothing at all (Feyerabend 1985:16).

Why is it necessary to push for the ultimate?

4 The rewards and excitements of scholarly work

The true nature of scholarly work makes it impossible to settle for less. Its eagerness and enthusiasm leaves nothing untouched. As Bohm and Peat (1989:14) emphasised in view of the question *how science can ever understand the essence of real problems?*: "The answer does not lie in the accumulation of more and more knowledge. What is needed is *wisdom*. It is a lack of wisdom that is causing most of our serious problems rather than a lack of knowledge." The researcher/inventor needs to move into the sphere of the beyond-method where an a-critical approach leaves criticism behind as a sterile ideological strategy and pursues knowledges and insights that bring about breakthroughs regarding static situations. This is of course a more demanding and challenging venture than 'mere research' and its stereotypes. This sphere represents the risky field of uncertainty and mystery, of never-ending explorations but also of adventures. It calls for thought pursued in a totally different dimension from the type of thinking that normally would accompany most of the methodical inputs in scientific and research work. Edgar Morin in a study on *Ideas* refers to the noological domain and the noosphere in order to articulate this type of thinking. He also introduces the important notion of complex thinking called for by complex situations.

At the same time this thinking manages to comply with the true nature of the subject related to the information and knowledge field, as suggested above, that offers itself as the domain where "light" is ignited that exorcises the darkness of ignorance, but also where "formative activities" are taking place that allay chaos and disorder. This becomes the truly exciting part of the involvement with committed research and inventions in the field of information science and information work. It contributes to the explorations and the disclosures of possible significant futures for societies and individuals that are inclined to very often gyrate and meander in a world of the total or relative absence of meaning.

Nothing in the line of excitement can really be compared with the experience of "I see" and "I find"! These experiences are unique and cannot be fully described in words.

Against this background a truly scholarly approach with its special focus and qualities can comply with the demands and challenges of this complex field posed to novel methodological endeavours and can offer the much desired excitement related to the invention of new futures related to knowledge and information exploration. Scholarly work in the true sense of the word, in its pursuit of creativity, is in full compliance with this suggested methodological approach. "Creation resists death by reinventing life" (Serres 1997:100). This has to do with the proper functioning of intelligence in institutions, in search of a thorough understanding of the theoretical as well as the practical dimensions of the information and knowledge sphere, "out of regard for the health of life and mind" (Serres 1997:136).

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