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A common pursuit: Paul Cilliers' and Wentzel van Huyssteen's epistemic attitudes

ABSTRACT

Paul Cilliers, late professor of complexity and philosophy of science at the University of Stellenbosch, argued that by acknowledging the complexity of particular systems, one is called beyond a foundationalist or relativist epistemology. He advocated for a modest epistemic attitude which recognises the provisionality of our knowledge claims. Advocating for a similar epistemic attitude, Wentzel van Huyssteen, extraordinary professor of theology at the University of Stellenbosch, argues that a postfoundationalist epistemic attitude moves beyond foundationalist and nonfoundationalist epistemologies. A postfoundationalist understanding of rationality facilitates interdisciplinary research by drawing on the concept of transversality and the shared resources of human rationality. This essay illuminates the common epistemic pursuit of both these highly respected scholars and illustrates the modesty of a postfoundationalist model of rationality. Furthermore, this essay proposes that by strengthening Van Huyssteen's postfoundationalist approach with the insights generated by Cilliers on complex systems, sustainable interdisciplinarity could be realised.

1. INTRODUCTION

Understanding the world in which we live seems to be a straightforward process, but turning our focus to the way in which we understand our world – how we filter our information and how we construct the models and metaphors we employ – has illuminated the intricacy of understanding itself. Modern or foundationalist epistemologies, giving rise to positivism, objectivism, rationalism and fundamentalism by drawing on the work of Descartes, Kant, Husserl, Carnap, Habermas and early Wittgenstein has given way to postmodern or nonfoundationalist epistemologies (Cilliers, 2000b:8; Van Huyssteen, 1999:23). However, postmodern epistemologies have generated relativism, idealism and perspectivism by drawing on the work of Kuhn, Rorty, Derrida and later Wittgenstein. In recent years there have been some scholars who advocate epistemologies that move beyond these extremes and that draw on the insights from foundationalist and nonfoundationalist epistemologies. Both Paul Cilliers and Wentzel van Huyssteen advocate an epistemic attitude that critically draws on foundationalist and nonfoundationalist epistemologies simultaneously in its engagement with reality. However, while Cilliers discussed the implications of complexity for epistemology, Van Huyssteen developed a description of rationality that draws on foundationalist and nonfoundationalist models of rationality. The purpose of this essay is to illuminate the common epistemic pursuit of both these highly respected scholars and illustrate the compatibility of Cilliers modest attitude and Van Huyssteen's postfoundationalist description of rationality. Furthermore, this essay proposes that by incorporating the insights generated by Cilliers on complex systems in Van Huyssteen's postfoundationalist facilitation of interdisciplinarity, a sustainable interdisciplinary approach might be possible.

With this in mind, this essay is structured along three engagements between Cilliers and Van

Huyssteen. The first engagement follows the motivation for and purpose of the epistemic attitudes of both these scholars. The second engagement illuminates the commonalities in Cilliers' modest epistemic attitude and Van Huyssteen's postfoundationalist epistemic attitude. The third engagement illustrates the modesty of a postfoundationalist's rationality and suggests that sustainable interdisciplinary facilitation could be achieved by combining insights of both these scholars.

2. MOTIVATION AND PURPOSE

The epistemic attitudes advocated for by Cilliers and Van Huyssteen share a common pursuit, but the motivations behind their pursuits and the use of their attitudes are different. It is therefore important to give a short overview of both Cilliers' and Van Huyssteen's motivation for proposing their respective epistemic attitudes.

Since his earliest work on epistemology, Van Huyssteen has been searching for an understanding of epistemology that will render the theologian a respected partner in the wider academic conversation. In order to do this Van Huyssteen engaged philosophers of science on two fronts. Firstly, in developing an adequate model of rationality and methodology for theology, drawing on *critical realism*¹ (Van Huyssteen, 1986:172), Van Huyssteen uncovered the interdisciplinarity of theological reflection. In other words, Van Huyssteen recognised that theological reflection needs to acknowledge its interdisciplinary nature.

Secondly, Van Huyssteen realised that a shift has occurred within philosophy of science itself. The modern approach to knowledge has been revisited by scholars such as Karl Popper and Thomas S. Kuhn and shown to be inept (Van Huyssteen, 2003:647). Modernists were confident and proud, claiming that they had objective, universal truth and that they would be able to construct a theory of everything given enough time. Postmodernists have moved away from conceptions of scientific rationality with its closely aligned beliefs in linear progress, guaranteed success, deterministic predictability, absolute truths, and some uniform, standardized form of knowledge (Van Huyssteen, 1999:6). Instead postmodernists reject global interpretations of science and place their trust in local scientific practice (Van Huyssteen, 1999:10).

For this reason, Van Huyssteen engaged postmodernists and distinguished his approach within the postmodern project – a return to modern assumptions – as a postfoundationalist and ultimately detached his approach from what he calls foundationalism. He developed a postfoundationalist approach that drew on the positive aspects of both foundationalist and nonfoundationalist approaches and facilitates interdisciplinarity without assimilation (Van Huyssteen, 2006:19)

Hence, the purpose of Van Huyssteen's postfoundationalist description of human rationality is to facilitate interdisciplinary research between theology and the natural sciences specifically, but he also argues that a postfoundationalist's rationality is appropriate for any interdisciplinary conversation (Van Huyssteen, 2008b:494). However, it should not be understood as a meta-

1. Cilliers (2000b:8) comments that although advocates of critical realism argue that it is a position that moves beyond foundationalism and relativism, critical realists fall back on one or the other when applying it to theories of knowledge. Cilliers (2007a:84) argued that we are always dealing with ontological and epistemological issues simultaneously (cf. Osberg et al 2008:214). Van Huyssteen, however, moves beyond a critical realist position in his postfoundationalist understanding of rationality by developing what he calls the *shares resources of human rationality*.

narrative and the reasons for this will be explained in the second engagement.

Reflecting on complex systems, Paul Cilliers argued that a modern epistemology is not appropriate for rendering such systems intelligible. He explained that while the analytical method may have been adequate for understanding *complicated systems*, such as Jumbo jets and computers, this approach is inept to grasp the workings of *complex systems*, such as the brain, language and social systems (Cilliers, 1998:1). The reason for this is that complex systems are not merely constituted by the sum of their parts, but also by the intricate relationships between these components (Cilliers, 1998:2). Cilliers (1998:iix-ix) wrote:

In a complex system ... the interaction among constituents of the system, and the interaction between the system and its environment, are of such a nature that the system as a whole cannot be fully understood simply by analysing its components. Moreover, these relationships are not fixed, but shift and change, often as a result of self-organisation. This can result in novel features, usually referred to in terms of emergent properties.

Therefore, Cilliers argued that a rule-based approach is inappropriate for understanding complex systems. He suggested that connectionist networks share the characteristics of complex systems and are intrinsically more sensitive to complexity (Cilliers, 1998:37). Building on this, Cilliers argued that postmodern epistemologies would be appropriate in rendering complex systems intelligible, but recognised that some postmodern positions are too open and vague to really contribute to our knowledge of the world (Cilliers, 2005:256). He suggested that a post-structural approach would be more adequate in this respect. Cilliers, therefore, argued for a *modest* attitude that would be careful about the reach of knowledge claims and of the constraints that make these claims possible.

On the one hand, the purpose of Cilliers' modest epistemic attitude was to challenge a foundationalist epistemology that assumes to understand complex systems by taking them apart. On the other, a modest epistemic attitude also critiqued a relativist attitude which argues that limited knowledge implies that anything goes (Cilliers, 2005:260).

3. THE NECESSITY OF A NUANCED ATTITUDE

The shift from a modern epistemology, which provided "truth", to postmodern epistemologies, which offers only "contextual perspective", has simultaneously been celebrated and mourned. As seen above, both Cilliers and Van Huyssteen argue that a more nuanced epistemological approach is necessary if we are to reflect on reality appropriately. Cilliers argued for what he called a *modest* epistemic attitude and Van Huyssteen for a *postfoundationalist* epistemic attitude.

Van Huyssteen suggests that postmodern thought has placed rationality itself under the microscope and seriously challenged the way rationality is understood (Van Huyssteen, 1999:3). Postmodern thought, in both its constructive and deconstructive modes, seems to reject ideas such as unity, totality, identity, sameness and consensus. Instead it appeals to pluralism, heterogeneity, multiplicity, diversity, incommensurability and dissensus (Van Huyssteen, 1999:24). Van Huyssteen, in agreement with Calvin Schrag and Jean-François Lyotard, acknowledge postmodernists' greatest talent as their remarkable ability to recognize and demolish meta-narratives. He writes:

... it is important to view the postmodern challenge as an opportunity for an ongoing and relentless critical return to precisely the questions raised by modernity. From this perspective, postmodern thought is undoubtedly part of the modern, and not only modern thought coming to its end. Seen this way, the modern and the postmodern are also unthinkable apart from one another, because the postmodern shows itself best in the to-and-fro movement between the modern and the postmodern, i.e., in the relentless interrogation of our foundationalist assumptions in all our reasoning strategies ... (Van Huyssteen, 1999:58-59)

However, while postmodern thought helps us to move away from the dangers of foundationalism, it is still rooted in nonfoundationalism and therefore does not help us move beyond relativism (Van Huyssteen, 1999:11).

Van Huyssteen (1999:31) summarises some of the challenges posed by postmodern thought as the rejection of epistemic assumptions; refuting methodological conventions; resisting knowledge claims and; obscuring all versions of truth.

Taking cognizance of these interpretations of postmodern thought, Van Huyssteen suggests understanding postmodern thought as a critical return to modernist assumptions. His postfoundationalist approach to human rationality is then also such a return to modern assumptions, but fuses epistemology and hermeneutics together. As such, he asks:

... is there a way to talk about epistemology and rationality that would take very seriously the critical concerns of postmodernity without succumbing to its extremes? I believe there is, and this refigured notion of rationality is what I have called *postfoundationalist rationality*: a model of rationality ... where a fusion of epistemological and hermeneutical concerns will enable a focused (thought fallibilist) quest for intelligibility through the epistemic skills of responsible, critical judgement and discernment (Van Huyssteen, 1999:33).

A postfoundationalist approach, according to Van Huyssteen, is a positive appropriation of postmodernism (Van Huyssteen, 1999:112). It rejects all forms of epistemological foundationalism and all meta-narratives (Van Huyssteen, 1999:113). However, while modernist approaches try to remove humanity from rationality, postmodernist approaches tend to lead to relativism by overestimating the contextuality of human rationality. In contrast, the postfoundationalist adopts a nuanced attitude by acknowledging that human knowledge is contextually shaped, but recognising that the “tools” we use for gaining knowledge is not contextually bound.

Van Huyssteen remarks that because the postfoundationalist is in constant conversation with modern and postmodern thought, postfoundationalist rationality is not to be understood in fixed terms (Van Huyssteen, 1999:117). The postfoundationalist adopts a particular *attitude* towards the epistemic values that shape human reflection. It is a dynamic approach that is in constant conversation with all reasoning strategies regarding the epistemic values they employ. A postfoundationalist approach enables one to fully acknowledge the role of context; the epistemically crucial role of interpreted experience; the way that tradition shapes the epistemic and nonepistemic values that inform our reflections; and the need to point creatively beyond the confines of the local community, group, or culture toward a plausible form of cross-contextual and interdisciplinary conversation (Van Huyssteen 1999:113).

In explaining what a *modest* epistemic attitude entails, Cilliers (2007b:4) drew on the distinction Edgar Morin makes between *restricted* and *general* complexity which have different epistemological implications (Morin, 2007). Cilliers (2011:143) explained that *restricted* complexity developed along the lines of chaos theory and fractal mathematics. This approach is reductive in nature, because it focuses on underlying patterns and universal principles of complex systems. While this approach favours interdisciplinary potentialities, it still remains within a foundationalist epistemology. It is a hybrid between foundationalist rationality and complexity, because it searches for the "laws of complexity" and the logic of foundationalist rationality cannot keep up with the generative, flexible and pluralist nature of knowledge that is needed to describe complex systems (Cilliers & Nicolescu, 2012:713).

In contrast to this, *general* complexity rethinks the description of knowledge (Cilliers 2011:143). *General* complexity requires that one tries to understand the relation between the whole and the parts. Knowledge about the whole or the parts is not enough. It is necessary to think of both simultaneously. Drawing on the ideas of Morin (2007:5) Cilliers (2011:146) offered three principles that can help to think in these terms. The concept of *dialogic* helps in associating the complementary and antagonistic relationship between two terms. *Organised recursion* illuminates the self-constitutive, self-organising and self-producing characteristics of complex systems and the *holographic* principle recognises that the activities of the parts, as well as, the occurrences on the macro-level participate in producing the system.

This implies that there is a dialectical relationship between knowledge and the system within which it is constituted (Cilliers, 2000b:9), i.e. a fusion of epistemology and hermeneutics. Cilliers (2000b:10) wrote:

There are facts that exist independently of the observer of those facts, but the facts do not have meaning written on their faces. Meaning only comes to be in the process of interaction. Knowledge is interpreted data.

Morin (2005:23) also explains that it is necessary to link both of the conceptions of the history of science:

The internalist mode sees the development of sciences in isolation, only in function of their internal logic and their own discoveries. The externalist mode sees them in function of historical and social developments. I think that it is necessary to link both ...

Cilliers in (Heylighen, et al. 2007) concurred and explained that a *modest* position moves beyond the dichotomy of relativism and foundationalism which are two sides of the same coin. Moreover, he suggested that the intersection between *general* complexity and postmodern philosophy can lead to very useful research. One of the greatest rewards of a modest approach is that it allows insights from both the natural and social sciences without having to trump the other.

Most importantly, a *modest* attitude is a responsible attitude (Cilliers, 2005:261) and a necessary attitude from the view of complexity (Cilliers, 2005:265). Cilliers (2005:261) wrote:

We only have limited access to a complex world and when we are dealing with the limits of our understanding, we are dealing with ethics.

4. THE RESOURCES OF A MODEST POSTFOUNDATIONALIST RATIONALITY

The previous two engagements between Cilliers and Van Huyssteen discussed the broad issues and common pursuit of their epistemological arguments and epistemic attitudes. The purpose of this engagement is to illustrate the links between a *modest* epistemic attitude and *postfoundationalist* rationality in more detail. In order to facilitate this process these will be discussed moving between Cilliers' and Van Huyssteen's epistemic arguments.

4.1 Ethics and rational agents

A very important insight from modelling complex systems is that some form of ethics is unavoidable (Heylighen, et al. 2007). To gain knowledge from a complex system, the system has to be modelled and the model represents an interpretation of the system which will always be reductive (Cilliers, 2007a:83). Explaining this statement, Cilliers drew a distinction between *knowledge* and *information*. He explained that knowledge should be reserved for information that is situated historically and contextually by a knowing subject (Cilliers, 2007a:85). The interpretation of information leads to meaningful knowledge. However, for knowledge to exist we have to place limits in the information, which means that the complexity of a system needs to be reduced or interpreted in order to gain an understanding of it (Cilliers, 2007a:86). Thus, it is necessary to identify the boundaries of the system (Cilliers, 2007a:86), but these boundaries are simultaneously a function of the activity of the system, and a product of the descriptive strategy (Cilliers, 2008:47). Moreover, we have to make certain modelling choices when describing phenomena, because we cannot have complete knowledge of complex things (Woermann & Cilliers, 2012:404). We have to interpret and evaluate and the model is selected in terms of the aims of our description (Cilliers, 2000a:46). However, the choice of models is not arbitrary, because some models work better than others, but we cannot claim that this choice is an objective choice (Osberg, et al. 2008:218). Models are necessary, but always involve decisions and values. This is why we should not hold on to these models uncritically (Cilliers 2000b:12). Thus:

In this regard, ethics should be understood as something that constitutes both our knowledge and us, rather than as a normative system that dictates right action (Woermann & Cilliers, 2012:404).

Van Huyssteen also insists that ethics play an intricate role in generating knowledge (Reynhout, 2006:9). Van Huyssteen (1999:179) observes that:

Knowledge is situated: shaped, limited, and specified by the location of knowers, by their particular experiences, by what works for them and what society permits to work for them, by what matters to them and to other knowers with more (or less) power, by what they trust and value and whether their objects of trust and value carry any weight in their surroundings.

That being the case, Van Huyssteen explains that evaluation is very important to the postfoundationalist and entails:

... the ability to evaluate a situation, to assess evidence and then come to a responsible and reasonable decision without following any preset, modernist rules (1999:143).

However, the postfoundationalist's rational judgment is not arbitrary. It is always based on

quite specific information generated in a very particular context (Van Huyssteen, 1999:144). Nevertheless, responsible judgement is more than just the expression of private feelings. It is a process of intersubjective communication which is focused on the contextual, but transcends the personal through intersubjective communication. This means that responsible judgement always entails a rhetorical process.

Explaining this understanding, Van Huyssteen draws on Harold Brown who suggests that rational judgment should be understood as an epistemic skill and that learning to make appropriate decisions involves the development of intellectual skills that are in many ways analogous to physical skills (Van Huyssteen, 1999:144). With this in mind, Brown also argues that judgements should be made by a community of *experts* who participate in a process of intersubjective deliberation and collective assessment (Van Huyssteen 1999:144).

Interestingly, Brown illustrates that people can function effectively and successfully with a set of beliefs that they later modify or change for other beliefs (Van Huyssteen, 1999:144). Van Huyssteen explains:

There need be no incompatibility between accepting that set of fallible claims for a substantial period of time, and also being prepared to reconsider them when we have good reasons for doing so (1999:144).

Thus, postfoundationalists emphasise the evaluative dimension of rationality in their discussion of rationality by highlighting the prominence of critical judgement (Van Huyssteen, 1998:42). Instead of focusing on the general, judgment needs to focus on the particular and the contingent (Van Huyssteen, 1998:24). Judgement should not be made according to general rules, and neither should there be a search of such rules. Van Huyssteen explains that the search for rational beliefs ceases and refocuses on a search for rational people "...who can exercise good sense and good judgement in difficult and complex circumstances" (Van Huyssteen, 1998:26).²

Van Huyssteen (1999:146) regards this as a postfoundationalist move and explains that the rationality of a knowledge claim is determined by the way human agents deal with sufficient reasons or evidence in making a knowledge claim.

The focus now shifts away from *rational claims* to *the rational agent*. This is a move away from abstract thoughts towards acknowledging the contextuality of the embodied mind.³ Van Huyssteen (1999:145) explains that a rational knowledge claim is now understood as a

2. Brown (1988:185), however, makes an important distinction: "... we must distinguish between a rational *agent* and a rational *person*, for we will see that a single person may be capable of acting as a rational agent in some circumstances, but not others." Furthermore, Brown (1988:186) points out: "We depend on our ability to be rational when we lack clear rules. When rules are available, an informed agent will recognize that it is the case, and will apply those rules; it is when rules are not available that we require rational assessment."

3. This focus on the embodied mind is reminiscent of some existentialist scholars. Miguel de Unamuno stated: "Philosophy is a product of the humanity of each philosopher, and each philosopher is a man of flesh and bone who addresses himself to other men of flesh and bone like himself. And, let him do what he will, he philosophizes not with the reason only, but with the will, with the feelings, with the flesh and with the bones, with the whole soul and with the whole body. It is the man that philosophizes" (Macquarrie 1978:15).

knowledge claim arrived at by a rational agent.⁴ Furthermore, Nicholas Rescher argues that the ability to act as a rational agent is determined by the quality of the expertise on the subject (Van Huyssteen, 1999:146). This does not imply that only experts can be rational. However, it does imply that sometimes the only rational decision to be made is to seek expert advice. To some extent everyone already identifies rational agents in their day-to-day lives. We regard the opinions of some as being more valuable than others.

Shifting the emphasis to the rational agent automatically integrates the social dimension of decision-making (Van Huyssteen, 1999:146). Furthermore, all knowledge claims have to be submitted to a community of people with the necessary skills to exercise responsible judgment on the particular issue at hand. It should be a community possessing the necessary skill to make an appropriate judgement on the issue (1999:147). In other words, rational agents of a specific tradition are needed to evaluate the merit of specific reflections within the context it is offered.

What makes this suggestion attractive is its departure from Kuhn. Van Huyssteen explains that Kuhn argued that an agreement reached by the majority makes a knowledge claim rational (Van Huyssteen, 1999:148). Van Huyssteen agrees that one cannot be rational in a vacuum, but the agreement of the majority does not make a knowledge claim rational, because consensus is not a prerequisite for rationality (Van Huyssteen, 1999:148). Van Huyssteen explains that the knowledge claims of agents need only be submitted to their peers for evaluation as to their rationality. Interestingly, although one needs a community of experts to arrive at a rational knowledge claim, it is still the agent that holds the rational knowledge claim (Van Huyssteen, 1999:149).

This point is very important, because a rational agent is not someone who knows rational propositions (Van Huyssteen, 1999:149). A community may function on the knowledge claim of a rational agent, but this does not make the community rational. The rational knowledge claim is held by the rational agent and adopted by the community. However, a rational agent can only be rational within a community and therefore the rational agent is dependent on the community just as the community is dependent on the rational agent.⁵ Rational knowledge claims are *involved* knowledge claims. It is the fallibility of the rational agent's judgments and knowledge claims that leads to the requirement of ongoing critical evaluation by the community of experts. However, the question of relativity still persists.

Regarding relativity, Van Huyssteen (1999:147) explains that while the rational agent is conditioned by a historically specific context, the agent's reflection need not be completely determined by the context. There is a big difference between *context-determined* and *context-conditioned* knowledge claims, and the postfoundationalist argues for the latter. Rational agents' knowledge claims can transcend the particularities of their social and historical context. Cilliers reflected on the contextuality of knowledge claims in his discussion of *provisionality*.

4. This links with the distinction Cilliers makes between *information* and *knowledge*. Knowledge is generated by the knowing subject.

5. Brown (1988) explains: "...a rational belief or decision is one that an individual has arrived at through a two-step process (these steps need not be chronologically distinct). The belief is based on judgement – where possession of the relevant information and expertise is a necessary condition for a judgement, and this judgement has been tested against the judgements of those who are also capable of exercising judgement in this case."

4.2 Resources of rationality

Cilliers argued that we need to be sensitive to the levels and limits of our knowledge. This does not mean there is no knowledge to be gained:

Knowledge acquisition is not the objective pursuit of truth, but rather a process of working towards finding suitable strategies for dealing with complex phenomena (Woermann & Cilliers, 2012:406).

In order to facilitate this knowledge-gaining process, Woermann and Cilliers suggested four resources that strengthen and promote a critical and modest attitude in dealing with complex phenomena. These are provisionality, transgressivity, irony and imagination (Woermann & Cilliers, 2012:408-414; Preiser & Cilliers 2010:268-276).

Provisionality entails a reminder that the meanings of our knowledge claims are dependent on the context in which they function (Woermann & Cilliers, 2012:408). However, concepts can be repeated and understandable across contexts, but the meaning of the concept will shift every time. Furthermore, descriptions and meanings change as the interpretation of the context changes, because complex systems are open and therefore never finally settled (Woermann & Cilliers, 2012:409).

Transgressivity involves the recognition that a modest attitude can never re-enforce accepted and imposed boundaries (Woermann & Cilliers, 2012:409). However, whilst we recognise the diversity and provisionality of our knowledge, we have to take a position, even though it is a temporary one (Woermann & Cilliers, 2012:410).⁶ This is the irony of a modest attitude – simultaneously affirming and undermining our knowledge and experience (Woermann & Cilliers, 2012:412).

Imagination, “constitutes the ability to generate variety and options, and to break out of one’s closed or limited hermeneutical circles” (Woermann & Cilliers 2012:413). Furthermore, Woermann and Cilliers clarified that there are two types of diversity. *Requisite* diversity refers to the minimal level of variety needed for a complex system to cope with its environment. *Excess* diversity, generated by imagination, refers to the ability of a system to experiment internally thereby generating a variety of strategies for operating in its environment (Woermann & Cilliers, 2012:414). It implies that we should allow personal and social imagination to flourish, because it is the only way that we can productively engage our environment (Woermann & Cilliers, 2012:415). This is important for every individual, because the individual’s state depends on the state of others in the system (Woermann & Cilliers, 2012:416). It is an investment in the future of the system (Cilliers, 2010:63).

The resources Cilliers argues for links extraordinarily well with the *shared resources of human rationality* Van Huyssteen argues for – responsible judgement and progressive problem-solving. *Responsible judgement* has been discussed. *Progressive problem-solving* involves making the most progressive theory choice – choosing the theories that have the best problem-solving abilities while allowing for further development (Van Huyssteen, 1999:165). The postfoundationalist chooses the research strategy most appropriate to the specific problem within the specific context (1999:172). As such, the postfoundationalist acknowledges

6. This links with Browns notion of rational agents’ capability to function appropriately on knowledge and beliefs they later modify.

the contextuality of theories, but does not fall prey to relativism because *progressive problem-solving* is an epistemic “tool” shared by all (1999:173).

The most important link between Cilliers’ and Van Huyssteen’s resources is to be found in their arguments for intelligibility and its relation to truth. Cilliers (1998:13) wrote:

... we wish to model complex systems because we want to understand them better. The main requirement for our models accordingly shifts from having to be correct to being rich in information.

However, intelligibility does not warrant truth (Osberg, et al., 2008:220). In agreement, Van Huyssteen distinguishes between that which is rational and that which is true. Achieving truth does not mean one has achieved rationality, or vice versa (Van Huyssteen, 1999:158). This is why Van Huyssteen describes rationality as the pursuit of the best reasons for our knowledge claims. Pursuing the truth does not make one rational. Being rational means searching for the best possible reasons why one claims what one claims. Therefore, Van Huyssteen (1999:12) describes rationality as:

The epistemic quest for *optimal understanding* and *intelligibility*; and the epistemic skill of *responsible judgement* involving *progressive problem-solving*.

While *rationality* and *truth* are vital, Van Huyssteen concurs with Brown’s, Rescher’s and Michael Stenmark’s argument for a weak link between the rationality and truth:

... we proceed rationally in attempting to *discover* truth, and we take those conclusions that are rationally acceptable as our best *estimations* of the truth (Van Huyssteen, 1999:158)

While recent theories may be regarded as better than previous theories, they should not be understood as “closer-to-the-truth” (Van Huyssteen, 1999:158). Moreover, what is achieved is not an *approximation* of truth, but an *estimation* of truth⁷ (1999:159). Truth could now be described as the best possible estimates we are able to make in the present moment.

The focus on intelligibility and its relation to truth by both Cilliers and Van Huyssteen brings forth a very exciting possibility of sustainable interdisciplinary reflection. As discussed above, Cilliers advocates for a modest epistemic attitude informed by complexity. This attitude involves an approach to knowledge that moves beyond the objectivist/subjectivist dichotomy by “thinking both”, because understanding particular complex systems or aspects of such systems, sometimes requires the possibility of gathering and manipulating knowledge without the intervention of a subject (Cilliers, 2000b:8-9). However, the social sciences and humanities cannot work with the same methodology as the natural sciences (Cilliers, 2008:53).

In agreement, Van Huyssteen (1999:116) explains that because of the interpreted and interpretative nature of experiences, scholars are empowered to identify the rational integrity of their respective disciplines by offering their own resources of critique, articulation and

7. Van Huyssteen (1999:158) comments: “As far as scientific theories go, our present world picture thus represents a better estimate than our past attempts only in the sense that it is, comparatively speaking, more warranted than they are because a wider range of data has been accommodated.” This is one of the reasons why Van Huyssteen argues for interdisciplinary research, because it will yield an even better estimation of the truth.

justification. He remarks that such a view responds appropriately to the postmodern argument that there are no universal epistemic systems (1999:116). This allows for methodology to be constructed contextually without forcing epistemic criteria onto it. Thus, scholars construct methodologies appropriate to their respective disciplines and contexts, according to what seems reasonable in pursuit of intelligibility and optimal understanding (1999:116). This means that all disciplines need not have similar methodologies. What is important is that they employ responsible judgement in constructing their methodologies. However, it is essential that all disciplines allow open discussion of their unique methodologies. This way the integrity of each discipline is protected, while allowing critique of its methodology and knowledge claims.

In this we find the exciting possibility of sustainable interdisciplinary reflection. Scholars from different disciplines are encouraged to develop models that would generate understanding of that which they mean to understand. These models may be different, but if they are developed by drawing on the shared resources argued for by Cilliers and Van Huyssteen, the knowledge generated in these disciplines can then be brought into interdisciplinary reflection by drawing on the shared resource, *transversality* (Van Huyssteen, 1999:136).8

5. CONCLUSION

The postfoundationalist acknowledges that our knowledge is contextually shaped, but argues that the resources we employ in coming to our knowledge is not contextually bound. In other words, while the knowledge that rational agents generate is shaped by their context, the “tools” they use for generating their knowledge are shared by all rational agents. This view celebrates postmodernists’ insistence on the contextuality of knowledge claims, but argues that this does not mean rationality itself is relative, because the resources of rationality are shared by all rational agents. Van Huyssteen (1999:113) explains that a postfoundationalist attitude frees us to acknowledge our strong commitments, whilst recognising the shared resources of human rationality in different modes of reflection. Moreover, a truly postfoundational attitude rediscovers the embeddedness of our rational reflection in the context of living, evolving and developing traditions.

This illuminates Cilliers’ and Van Huyssteen’s common pursuit. Although Cilliers’ and Van Huyssteen’s epistemic attitudes have different histories, they are both advocating for an epistemology that creatively moves beyond foundationalist and nonfoundationalist epistemologies. In pursuing such an epistemology they share resources of understanding and as such assist each other in developing a modest postfoundationalist description of human rationality.

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8. Van Huyssteen (2008a:518) explains: “Transversal reasoning ... is a pragmatic approach to the performative praxis of reason as we venture down the risky road of interdisciplinary dialogue. As such, it is not about arbitrarily opening ourselves up or closing ourselves off to other viewpoints. It is about discovering what it might mean to share an epistemic space that allows for the kind of interdisciplinary critical evaluation that includes a critical self-evaluation and optimal understanding.”

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KEY WORDS

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