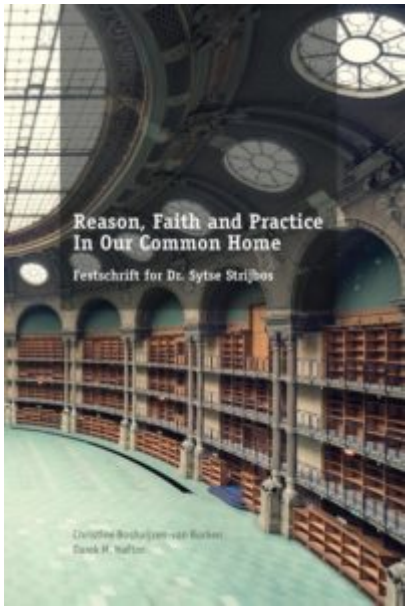
Reflections On The CPTS Model Of Interdisciplinarity ~ Festschrift for Dr. Sytse Strijbos



Introduction

In this short paper, I adopt the role of 'critical friend' to the Centre for Philosophy Technology and Social Systems (CPTS)[i] research programme, and the contribution of Sytse Strijbos in particular: I believe the CPTS model of interdisciplinarity has some significant strengths, and also some potential weaknesses that the researchers taking it forward might wish to address. Most of my critique refers to Strijbos and Basden (2006a), as this offers the grounding for the rest of the CPTS research programme. However, my focus on this should not be taken as a sign that I regard other contributions as less significant.

Over the coming pages I will first of all highlight what I see as the strengths of the CPTS model, focusing in particular on the value of the systems approach embodied in it, and its potential applicability to technologies beyond information systems (the practical focus of most CPTS authors to date). I will then offer two critiques. The first points to a gap in the model: the omission of ecological systems as an aspect of analysis. The second critique raises some questions about the nature of the links between research at the levels of the artefact and directional perspectives. I suggest that, when there are significant disagreements on the ethics of a technology, to the extent that some researchers wish to prevent its development and others wish to press ahead, we have to ask whether and how interdisciplinary co-operation should proceed.

The Strengths of the CPTS Model

In my view, the CPTS model of interdisciplinarity has several important strengths: it is explicit about its theoretical underpinnings; is inclusive of ethical debates; takes a useful systems approach to understanding the relationships between fields of inquiry; is potentially applicable to a broad range of technologies; and

can enable the incorporation of many more disciplines than are currently included in the CPTS research programme. I discuss each of these strengths in turn below.

2.1 The Value of Explicit Theory

The first strength is that there is an explicit theoretical rationale for the focus on basic technologies, technological artefacts, socio-technical systems, human practices and directional perspectives as the principle concerns flowing into interdisciplinary engagements. As Strijbos and Basden (2006a) make clear, these categories are derived from the philosophy of Dooyeweerd (1955). Although I am not in complete accord with Dooyeweerdian thought, I nevertheless appreciate that there is a coherent set of ideas lying behind the CPTS model. This is important because it takes us a step beyond models that are simply born out of strategic alliances between researchers from two or more disciplines who happen to share common interests. While alliances like these can be useful for pursuing focused projects with particular purposes, it is difficult for them to give rise to more general models of interdisciplinarity unless there is a focus on providing some theory that explains why the model might have utility beyond the immediate local circumstances in which it was generated.

2.2 The Incorporation of Ethical Considerations

In addition to being explicit about theory, the CPTS model is inclusive of ethical considerations under the heading of 'directional perspectives'. This is important because there is a tendency in modern societies for ethical issues (about which ends to pursue and why) to be separated from technical ones (how to implement the ends that have already been pre-determined) (Habermas, 1984a,b). Even some supposedly participative approaches to information technology planning give people scope to debate means (ways to implement technologies) but not ends (the missions of their organisations that give rise to desires for technological solutions) (Willmott, 1995). By incorporating the research domain of 'directional perspectives' into the CPTS model of interdisciplinarity, and by making it clear that these can *frame* debates about technology (as well as being impacted by technological innovations themselves), it becomes much more difficult to marginalise ethical concerns than might be the case if the human dimensions in the model were restricted to socio-technical systems and human practices. Clearly, the strong inclusion of ethical considerations comes about because of the theoretical influence of Dooyeweerd (1955), but it makes the model equally useful from a critical theory standpoint (e.g., Habermas, 1984a,b) or a critical systems

perspective (e.g., Ulrich, 1983; Jackson, 1991; Gregory, 1992; Oliga, 1996; Midgley, 2000; Córdoba and Midgley, 2003, 2006, 2008). For most writers on critical systems thinking, ethical reflection and dialogue are essential aspects of inquiry (interdisciplinary or otherwise).

2.3 The Systems Approach

The CPTS model also offers a strong *systemic* conceptualisation of the relationships between the various kinds of research that flow into interdisciplinary practice. Strijbos and Basden (2006a) focus on the *integration* of ideas across the levels of basic technologies, technological artefacts, socio-technical systems, human practices and directional perspectives. Here, they draw upon Boden's (1999) understanding of integration (one discipline learning from another), although there is actually a long tradition of integrative research going back to some of the earliest work in systems science (see, for example, Bogdanov, 1913-17; von Bertalanffy, 1956; Boulding, 1956; Miller, 1978; Troncale, 1985; Bailey, 2001; and Midgley, 2001). Many authors have tried to transcend the limitations imposed on inquiry by seemingly arbitrary disciplinary boundaries. While some of these (e.g., von Bertalanffy, 1956) have viewed integration as the generation of a new 'general system theory' to complement or even replace the old disciplinary ones (Boden, 1999, is critical of this), others take a different view. It is especially interesting to read Boulding (1956), who offers a 'skeleton of science' that is structured into similar levels as the CPTS model, and Boulding even recognises the relevance of spirituality – although there are actually more levels in Boulding's framework (and a tighter hierarchical relationship between them[ii]) because his purpose is to provide a model for use across the disciplinary sciences, not just within the field of technology.

2.4 Applicability to a Broad Range of Technologies

Although the CPTS interdisciplinary research community has taken information systems as its first application domain, Strijbos and Basden (2006a) are explicit that their desire is to generate ideas that can be of use to research a wider set of technologies. I have therefore decided to test the wider applicability of the CPTS model through two simple 'thought experiments'. I have taken two technologies – workplace drug testing and genetically modified organisms (GMOs) of use in food production – to see whether the levels of analysis in the CPTS model are able to account for the various different issues that I am aware are being researched in these areas. I am not a specialist in either of these fields, yet I have taken an

interest in some of the issues associated with them. Each is discussed in turn below, starting with workplace drug testing.

The basic technologies of workplace drug testing are chemical markers that indicate the presence of illicit drugs in urine samples. These chemical markers are the basis for the production of testing kits (artefacts). The kits are deployed within socio-technical systems: organisations wishing to test their employees in order to improve safety in the workplace (drug testing is generally introduced in relation to safety-critical occupations, although some employers use it more widely). Various human practices may be impacted, including personnel selection (drugs testing can become part of the recruitment process), counselling for people with drug and alcohol problems (many testing regimes are introduced alongside rehabilitation programmes) and drug-taking behaviour (people may stop taking drugs, moderate their use, or shift to drugs that are less easy to identify in a urine sample). Finally, at the level of directional perspectives, various ethical issues are relevant: e.g., those surrounding the tension between public safety and personal freedom. It seems to me that the CPTS model can capture all the main concerns of researchers looking at workplace drug testing, and it reveals substantial scope for interdisciplinary engagement.

Next we can look at GMOs. At the level of basic technologies, the functions of various genes have been identified, and new genetic combinations with desired properties have been developed. At the level of the artefact, crops are produced (e.g., genetically modified, disease resistant maize plants) using the results of the basic genetic research. These are then deployed within socio-technical farming systems, and these in turn interact with larger systems, including those associated with retail and international trade. Human practices of farming and eating are affected, as are political practices (e.g., there may be an increase in direct action protests). Finally, at the level of directional perspectives, the ethics of genetic modification are debated in research publications, the media and amongst ordinary citizens.

In the GMO example, I suggest that *most* (but not all) of the relevant research themes are accounted for by the CPTS model (I say ‘most’ because ecosystem research is not explicitly included, and I’ll pick up on this later). Most importantly, the need to link together research at the various levels becomes quite apparent once we explore the connections between them. My own view is that the basic/artefact research on GMOs is still, by and large, overly disconnected from

ethical research, despite the fact that many scientific authorities now recognise that the GMO issue (together with some other issues debated in the latter half of the 20th Century) has brought the whole credibility of ethically-disconnected science into question (e.g., ESRC Global Environmental Change Programme, 1999). For some GMO research that seeks to overcome this problem, see Cronin et al (2014).

Based on the two examples above, and the CPTS research on information systems presented elsewhere (Strijbos and Basden, 2006b), I believe it is reasonable to conclude that the CPTS model of interdisciplinarity may well be useful for research across a range of technologies (but with some caveats, to be explained shortly).

2.5 The incorporation of a Wide Range of Disciplines

A final strength of the CPTS model is that it has the potential to incorporate a wide range of disciplinary perspectives from the sciences and humanities. In relation to information systems, the various chapters in Strijbos and Basden (2006b) demonstrate the inclusion of computer engineers, information systems practitioners, management scientists, systems thinkers and philosophers within the CPTS interdisciplinary network. However, this is a relatively limited range of disciplines in comparison with those that might need to be involved in interdisciplinary research on workplace drug testing (biochemists, manufacturing technologists, organisational analysts, economists, psychologists, psychiatrists, social workers, sociologists, policy analysts, systems thinkers and philosophers) or GMOs (biologists, agricultural scientists, economists, political scientists, sociologists, ecologists, systems thinkers, philosophers and theologians). The disciplines in brackets are just my own suggestions for inclusion – the potential scope is no doubt wider.

Critiques of the CPTS Model

Having highlighted what I see as the main strengths of the CPTS model of interdisciplinarity, it is now time to look at two potential weaknesses: the absence of an explicit focus on ecosystems, and what appears to be the assumption that scientific research into basic technologies and artefacts can sit harmoniously alongside philosophical research on directional perspectives, even when philosophers are advocating the abandonment of the technologies in question. I deal with each of these in turn below.

3.1 Ecosystems Research

The 'thought experiment' on GMOs that I briefly described above highlights a missing level in the CPTS model: the level of ecosystems. Of course, one could argue that ecosystems research needs to be conducted as part of the existing foci of the model: at the levels of the artefact (where ecological impacts of GMOs might be assessed), the socio-technical system (which people might claim includes ecological elements alongside the technical and social ones) and directional perspectives (where ecological arguments could be used to support either pro- or anti-GMO positions). However, it is *always* the case that the ecological, ethical, social and technical levels are relevant to one another – it is precisely the point of the CPTS model to demonstrate and formalise this. Therefore, to make the ecological implicit in the technical, ethical or social is to accept an aspect of the reductionist rationality that the CPTS model has been designed to challenge.

Worse than this, I suggest that the marginalisation of ecological concerns is systematically prevalent in Western political (and also many academic) discourses and practices (although thankfully less so than just one generation previously). There is therefore a danger that, left unaltered, the CPTS model will act to reinforce this marginalisation. I say that the marginalisation of ecological concerns is *systematically* prevalent in Western discourses and practices because I believe that marginalisation processes are far from random. Elsewhere, I have written about this at length (Midgley, 1994). Here I shall simply point out that the marginalisation of environmental issues has resulted from the dominance, over several hundred years, of anthropocentrism (seeing humankind as the centre of things, somehow disconnected from our environment) – and Western philosophy has not been exempt from making anthropocentric assumptions. Even some systems thinkers (let alone philosophers) root the origins of rationality in either the individual human mind alone (following Kant, 1787) or linguistic communities (following Habermas, 1984a,b), thereby ignoring Bateson's (1972) insight that both mental and social phenomena interact with ecological systems (Midgley, 2002). From Bateson's (1972) perspective, rationality can be seen as a product of the wider systems we participate in – not a product of human beings or communities in isolation (also see Midgley, 2000).

If the proponents of the CPTS model want to take this point seriously, they will be faced with a dilemma: either remain faithful to their original translation of

Dooyeweerdian philosophy into a framework for interdisciplinarity, thereby preserving the marginalisation of ecosystems research, or further develop the model to incorporate the ecosystems focus. Without conducting some new research, I am unsure whether or not this will necessitate revising some of the original Dooyeweerdian concepts, but in my view the whole issue is worth looking into. As I see it, exploring the ecological impacts of technologies (at local, regional and global levels) is a pressing priority, and we marginalise this at our peril.

3.2 Dealing with Conflicts over Normative Beliefs

My second critique of the CPTS model comes from asking the question, 'what if some researchers wish to prevent the development of a technology?' It seems to me that the CPTS model already pre-supposes the existence of a given technology (such as information systems), and the task of the interdisciplinary research community is to bring their various perspectives to bear on it, supporting each other in making everybody's work more systemic. This is certainly a laudable aim, but what when a technology is at a conceptual or early developmental stage and normative explorations at the level of directional perspectives lead to a conclusion that it is illegitimate? In such circumstances, will philosophers of technology (or others engaged in research on ethics) be expected to co-operate with those whose mission is to bring the 'illegitimate' technology to fruition?

A rejoinder to this question from an advocate of the CPTS model might be that this is *exactly* what needs to happen: without interdisciplinary engagement there will be no systemic thinking about the technology and therefore no chance to affect its development. My problem with this answer is that it is a little naïve with respect to the power relations that surround the production and deployment of technologies. Most technologies are produced by companies who make substantial investments in research and development. While they expect some ideas to fail, they also expect enough to succeed to yield a return for their shareholders. These companies therefore have significant vested interests, and the scientists working for them are rarely immune to commercial pressures: in many research and development divisions, the continued employment of scientists depends on the results they achieve. There is therefore an incentive for people working at the levels of basic technologies and artefacts to draw narrow boundaries around their research and exclude collaboration with people bringing them the very worst kind of 'bad news' – that their new idea might, from some

points of view, be considered completely illegitimate.

Again there might be a rejoinder from an advocate of the CPTS model. Surely closing off to this bad news is not *really* in the self-interest of a company developing a new technology. Doesn't a belief in *enlightened* self-interest dictate that the company should be aware of potential problems with the technology so that they can address them in advance of a commercially damaging crisis? This is certainly the logic I have used myself when discussing the value of systems thinking with managers and policy makers. I believe that, if companies can be persuaded of the utility of a systems approach, then it is usually worthwhile for philosophers of technology (and others with an interest in ethics) to engage with those developing a seemingly 'illegitimate' product – *as long as this engagement is meaningful*. However I suspect that, in the majority of situations, the volatile mixture of commercial self-interest, the desire for secrecy so that the company can gain some competitive advantage over others in the same market, and fear and distrust of people with radically different perspectives will either prevent engagement altogether, or will limit this engagement to a tokenistic recognition of other points of view without there being any real prospect for changing the technology in question. In the case of engagement that is completely blocked, the philosophers of technology (and others with ethical concerns) will know where they stand: they will be better off working independently, or through alliances with other stakeholders, to make their case in various civil society fora. It is the tokenistic form of engagement that is more worrying: it is conceivable that the CPTS model might be used to demonstrate a coherent logic of engagement, thereby allowing ethicists to be 'captured' (or even duped) by those who have no real intention of reflecting meaningfully on their chosen path for action.

The issue is therefore whether use of the CPTS model of interdisciplinarity may, in situations where there is a strong normative conflict, result in a bias towards the values of the developers of a technology, with ethicists getting unwittingly tied up in pseudo-dialogues with their opponents. Anyone who is sceptical about my critique might ask themselves how often scientists with a nascent technology, employed by a company which has invested in its development, knowingly abandon that technology after hearing the arguments of philosophers. I would love to be proven wrong, but I suspect that this is a very rare occurrence indeed.

If the proponents of the CPTS model want to take this point seriously, I suggest it should result, not in the abandonment of the model (it has some significant

strengths, and represents an ideal of good practice), but in further critical reflections on when and how it should be used. If we are dealing with less controversial technologies, such as information systems, this is not a major issue: the vast majority of people regard information systems as a 'good thing', and the need for interdisciplinarity arises because of problems in making the technologies work to their best advantage in social systems (without subordinating human desires to technological dictates or creating unwanted side-effects). The value of the CPTS model is therefore more or less self-evident in this scenario. However, if we are talking about a controversial technology in the early stages of development (such as GMOs before they went into commercial production), this is another matter entirely. If there is a chance of the CPTS model being co-opted to promote pseudo-dialogue rather than meaningful engagement, then social researchers might need to think seriously about how they explore situations characterised by value conflicts and power relationships prior to, alongside of, and/or instead of engaging with technology development. For this purpose, some of the literature on critical systems thinking (e.g., Ulrich, 1983, 2001a,b) and systemic intervention (e.g., Midgley, 2000; Córdoba and Midgley, 2003, 2006, 2008; Pinzón and Midgley, 2011, 2013) may be useful, as writers in these areas have been working with questions of power and participation for over twenty years.

Conclusions

In this short paper, I have sought to reflect on the strengths and weaknesses of the CPTS model of interdisciplinarity so as to support its further development. In my view, there are some significant strengths to the model that make it *worth* developing: in particular, it is explicit about its theoretical underpinnings; is inclusive of ethical debates; proposes systemic relationships between fields of inquiry; is potentially applicable to a broad range of technologies; and can enable the incorporation of many more disciplines than are currently included in the CPTS research programme.

However, there are also some potential weaknesses that only come to the fore once we think of the model in relation to technologies other than those to which it has already been applied. My reflections on the GMO issue have raised a question about where ecosystems research might fit. I suggest that a new 'level' (ecological systems) is needed in the CPTS model, and further work would be useful to see whether this adaptation will necessitate any rethink of the

philosophy underpinning the CPTS research programme. The controversial nature of the GMO issue also raises a question about how those developing a technology and those opposing its development could realistically be expected to collaborate on interdisciplinary research. As I see it, the worst case scenario is not a breakdown of dialogue (then people know where they stand), but co-option of the CPTS model by vested interests to enable a *pseudo*-dialogue that effectively neutralises the perspectives of those arguing that a technology is illegitimate. To avoid this kind of scenario, proponents of the CPTS model may be able to learn more about how to explore situations characterised by value conflicts from people in neighbouring research communities engaged in critical systems thinking and systemic intervention. These are my own interests, and I look forward to a continuing dialogue.

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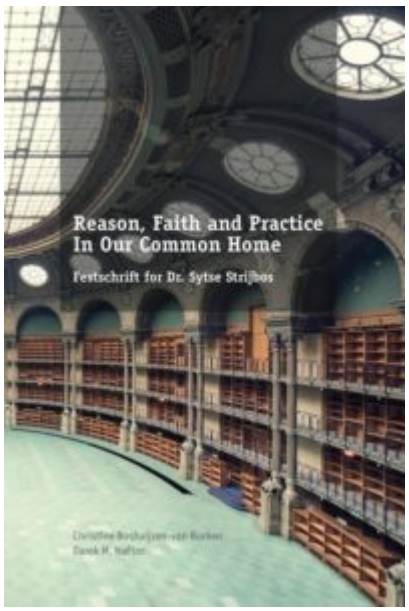
NOTES

[i] CPTS research program is now under the umbrella of the International Institute for Development and Ethics (IIDE)
[ii] Boulding (1956) proposes a tight hierarchy, with simpler, smaller sub-systems being the 'building blocks' for the emergence of more complex, larger-scale systems. While there is a *general* movement from small to large in Strijbos and Basden's (2006a) list of basic technologies, technological artefacts, socio-technical systems, human practices and directional perspectives, I know these authors are aware that a strict hierarchical representation is problematic. The problems become particularly evident when you look at the relationship between socio-technical systems and human practices. A socio-technical system can be as small as a department within an organisation or as large as the global economy. Therefore, the relationship between socio-technical systems and human practices cannot be described simply as a class of systems (socio-technical ones) within a wider human environment: some socio-technical systems may *contain* human practices, and other human practices will be outside, and mutually influencing, those systems. The exact relationship between socio-technical systems and human practices therefore needs to be defined in a locally meaningful way within each interdisciplinary research project.

A Dooyeweerdian Critique of Systems Thinking ~ Festschrift for Dr. Sytse Strijbos



Abstract

Systems thinking has developed over the decades, into several streams, which seem to operate in parallel with little dialogue between them. Each stresses different theoretical issues or problems but, in addressing them, other deeper problems are revealed that are often ignored. This essay briefly reviews three of the streams with the theoretical issues they tackle, and some of the deeper problems. To address these deeper problems, and also to facilitate dialogue between the streams, Dooyeweerd's philosophy is employed to reintepret the theoretical issues in new ways, in which meaning is central. This initial proposal calls for further research.

Introduction

In its various forms, systems theory has been employed as a framework for understanding many issues, most related to the relationship between entities and environment. Systems thinking has developed over the decades, into several streams, each of which stresses different theoretical issues: holism, the system, its parts and its environment, and societal systems. As such, each stream throws up new problems, some of which are ignored, ("elephants in the room"). (The use of the word 'system' as in 'systematic' is not considered here.)

Sytse Strijbos (2010) sought to bring together systems thinking with Dooyeweerdian thinking, especially discussing how systems thinking may be interdisciplinary and bringing in a concern with normativity that most systems thought lacks. However, there has been no systematic consideration of how Dooyeweerdian thinking can dialogue with systems thinking in each of its forms.

This article explores the contribution that Dooyeweerd's (1955) ideas can make more generally to addressing such problems, including his law-oriented view of subject and object, his idea of irreducibly distinct aspects, and his presupposition that meaningfulness, rather than existence, is the foundation. First, issues that are important in several systems discourses are identified, along with problems. Then these are discussed in the light of Dooyeweerdian thought.

Systems Thinking in its Varied Forms

For convenience of discussion, systems thinking is separated into three streams, which stress different major issues, and each of which contains several discourses. The discourses overlap and some discuss issues from other streams. A number of critical questions or problems will be raised as the discussion proceeds.

2.1 Systems Thinking and Holism

Systems thinking is seen by many as an antidote to reductionism, as an holistic approach that tries to be sensitive of the wider world, and not just focus narrowly on entities. Reductions are of many kinds, but the kind that is problematic concerns how we see the world, and reductionism is an adherence (explicitly or tacitly) to a limited way of understanding the world, such as from physicalist, functionalist or managerialist perspectives. To Midgley (2000, 39) reductionism sees the world as "simple, objective, causal", but this does not adequately express all that systems thinking embraces, which can include the non-causal and subjective. Yet some reductionism does not assume causality, so Clouser's (2005) approach is preferred here, which defines reductionism in terms of elevating an aspect of reality, with the result that 'nothing but' that aspect is important in practice, and required for full explanations of all other phenomena.

Systems thinking opposes two tendencies of reductionism: (a) to assume that a whole can be fully explained in terms of its parts, and (b) that the whole may be understood without reference to its environment. Thus systems thinking stresses the *whole* rather than the collection of parts that comprise it: the whole is more than the sum of its parts. A system is more than the sum of its subsystems.

The idea of holism is attributed originally to Smuts (1927), who thought that seeing the universe in terms of 'wholes' rather than in terms of, for example, matter or spirit. It is wholes, rather than parts, which provide the better account. Smuts discussed the structure, dynamism and causality of wholes, and identified a

provisional suite of ‘gradings’ of holism (material, body, animal, personality, groups, spirituality). However, Smuts and others tend to presuppose the possibility of wholes: what is it that makes wholeness and holism possible?

Systems thinking holism addresses not only the whole-and-its-parts but also the whole-within-environment (von Bertalaffy 1968; Ackoff 1963). Systems thinking takes account of how a system interacts with its *environment* while maintaining its own identity within that environment.

Two major applications of this idea are in the life sciences (organisms in biological, physical and psychical environment) and the organizational sciences (organizations in social, economic, legal and other environments). The question remains, however, on what basis we may differentiate types of wholes and types of environments. Bunge (1979), for example, excluded the possibility of psychical systems “for fear” that some might posit disemboded spirits as systems; fear does not seem valid as a basis for deciding which types there might be.

What diffrentiates system from environment, especially in the organizational field? In the practical context of wanting an holistic *systemic intervention*, Midgley (2000) discusses the idea of *boundary* between system and environment in some depth. It is the concerns of a stakeholder group that defines the boundary that is assumed by that group for a system. From this arises an ethic (values, purpose in action and its associated rituals), which might conflict with other ethics. One group might be ‘sacred’ (dominant or central), with the other treated as ‘profane’ (disparaged, marginalized or ignored). Midgley, however, discusses only the *processes* surrounding the operation of boundaries and presupposes differences in concern and stakeholder group. He gives little attention to grounds on which it might be valid to differentiate these. He seems to allow for multiple boundaries (e.g. geographic, social, economic, legal, religious) but does not explicitly discuss this, yet to be able to handle these is vital for discussing human activity systems.

Checkland (1981) introduced what became known as *Soft Systems Thinking* (SST) as a way to address issues in *human activity systems* like organizations and businesses, and groups within them. This recognises that what is a ‘system’ depends on the way people see it, especially on their *Weltanschauung* (way of seeing the world). Checkland and his colleagues developed extensive practical tools for systems thinking in organizational contexts, including *Soft Systems*

Methodology. For example, six main things need to be understood about any human activity system: CATWOE, its customer, actor, transformation, *Weltanschauung*, owner and environment.

Yet SST has been criticised by *critical systems* scholars on two accounts. Firstly, SST has no explicit place for normativity, except that which is completely at the mercy of the particpants' *Weltanschauungen*, and hence SST's holism is still constrained by the *Weltanschauungen* of those present. Secondly, SST has little place for societal structures, such as power or ideology, which 'make' people do what they do. Midgeley's (2000) systemic intervention does take structures into account, and even a system's effect on structures in the environment, but still has few firm grounds for normativity.

2.2 Systems Thinking: The System and Its Parts

Systems thinking must have an idea of what a system is. A number of basic propositions are widely agreed, though sometimes a little fuzzily, such as: a system is composed of *parts* that are *related* to each other inside a *boundary* that defines the system as a *whole*. Each part or sub-system may itself be seen as a system, and vice versa: any system may be seen as a sub-system of its environment; this places great emphasis on the *part-whole relationship*. System activity is seen in terms of systems receiving inputs and transforming them into outputs – but is this sufficient? Ackoff & Emery (1972) and many others hold that systems have *purpose;* what constitutes purpose?

Many kinds of entity have been considered systems: manufactured artefacts like bicycles, organizations, physical things like galaxies, living things, and even society itself (Ackoff 1974). This led some to ask how different types of system relate to each other, and Bunge (1979) dfferentiated five levels of systems (physical, chemical, biological, social, technical) and Boulding (1956), nine levels of systemness – static, simple-dynamic, cybernetic (control mechanisms), open or self-manufacturing, societal (plants), mobile and self-aware (animal), self-conscious (human individual), socially-self-conscious (human society), transcendental (ultimate, absolute, inescapable). But on what basis should we judge, or choose between, such suites of levels?

Hierarchy theory (Pattee, 1973) tries to identify principles of such levels, such as: the relationship between levels is asymmetric, entities at each level have properties that characterize that level, an entity may belong to several levels,

levels of observation differ from levels of organization, each level imposes different kinds of constraint, and so on. But philosophy would ask what makes levels, and differences between levels, possible?

Systems are *dynamic* and yet exhibit a certain *stability*. Systems are complex and Ashby (1956) devised his *Law of Requisite Variety*, which states that for a system to be stable, then it needs an internal control system that has at least as many states as the system being controlled. This may be extended to say that a knowing-system (e.g. human or knowledge base) can only understand systems that are simpler than itself.

In living systems, Maturana and Varela (1980) employed the idea of *autopoiesis* as a way to account for how biotic organisms maintain distinctness from the environment while depending on it physically and continously interchanging material with it – as *open systems*. Midgley makes two criticisms of autopoiesis. One is that the plurality of kinds of phenomena are reduced to the biological. How can we understand the stability and integrity of a system without such reducton?

A partial answer may be given by Beer's (1984) *Viable Systems Model*, which was devised in organizational science, it identifies what subsystems a system (of organizational kind) needs to have in order to maintain viability. However, does this model reduce everything to the organizational aspect?

Midgley's second criticism is that Maturana's claim that autopoiesis is 'scientific' boils down to what happens to be meaningful to a consensual community. Given that the community in which the 'theory' of autopoiesis is discussed already accepts pluralism as a starting point, does it do any more than reinforce existing beliefs of that community?

We may also add the questions, What constitutes stability, viability or integrity of the system? Which of many environmental instabilities do we take into account, ranging from random atomic trajectories to the vicissitudes of fashion or markets? If stability is defined in terms of the persistence of the system over time, we must first define what it is meaningful to take into account in judging persistence.

A living system seems also to be a physical system. So some began asking how this could be. Driven by adherence to ideas of evolution, many asked how living systems could evolve or emerge from physical systems. *Emergence* is offered as an explanation: 'higher'-level properties (or 'patterns' or 'regularities') like life

emerge from ‘lower’-level properties meaningful to chemistry and physics. An emergent property is a property of a system that is not a property of any of its sub-systems (Hartmann 1952). (Midgley (2000) uses ’emergence’ to refer to causal repercussions, e.g. deaths emerge from drink-driving, but that is not the meaning used here.) The idea of emergence has been around since Aristotle, but Goldstein (1999) gives a modern characterization of it as: features not previously observed, coherence over a period of time, ‘wholeness’, a product of dynamic evolutionary processes, perceivable (“ostensive”). However, for every account of emergence so far offered, is not meaning ‘smuggled in’ from a different level in order to recognise the properties that have emerged? For example, we say that life emerges from chemical subsystems, but on what valid basis do we have the idea of life as something important, as opposed to mere ultra-complex-carbon-chemistry?

The questions remain as ‘elephants in the room’, which few recognise and fewer discuss. They presuppose pre-given meaning.

3.3 Systems Thinking and Social Structures

“It’s the system, and I’m caught!” This meaning of ‘system’, as “an organized society or social situation regarded as hampering, stifling or stultifying” (Webster 1975, 2322) cannot be tackled with the concepts developed above. Neither can the idea of, for instance, economic system. ‘System’, here, refers to structures within which we live and which constrain, and perhaps enable, that living. Normativity, insofar as its implication of ‘ought’ constrains us, may be seen as system. (The term, ‘systematic’ would also seem connected with this.)

This was how Weber (1994) and Parsons (1971) used the term ‘system’. System is that set of structures that constrain and guide our activity, and which operate by mechanical rules. These rules guide the activity of people within such systems. They are mechanical rules insofar as they are designed to be obeyed without question and this means, supposedly, that they remove responsibility from the individual and remove meaningfulness and normativity from their activity. In ‘the system’ – whether of an organization, the state or society – life becomes meaningless. Systemic life is contrasted with the lifeworld by Habermas (1987), which is replete with meaning and normativity.

Two questions arise: First, does this view hold true? Paradoxically, the ‘mechanical’ rules that are system embody a presumed normativity, an idea of

what is right and wrong. Even if this were not so, Geertsema (1992) argues that the Weberian-Habermasian view does not hold true, pointing out that even those trapped in supposedly meaningless occupations can still find meaning and satisfaction even in the very midst of their work. The supposed mechanical following of rules only occurs because people tacitly agree do so. Geertsema's observation suggests that meaning and normativity may be inescapable.

Second, how may it be linked with the above ideas about system? Luhmann (1995) sought to link this with the above systems thinking, by developing a theory of *Social systems*. Social systems challenge the above systems thinking, and require new formulations thereof. If X and Y are two people, then, to X, Y is environment while, to Y, X is environment; if a system is always 'within' its environment, how can X be within Y within X? Does this suggest that the asymmetric idea of 'within' is inappropriate? As Luhmann pointed out not only are individuals within society but society is within individuals. Without resorting to such spatial metaphors, can we understand what kind of relationship this is?

Luhmann tries to account for this by saying that, within a highly complex environment, within the system boundary is a zone of a zone of reduced complexity, which is selected and processed by referring to *meaning*; it is also meaning that defines the distinctive identity of a system; this applies to both social and psychical systems, with different kinds of meaning. To Luhmann, social systems are systems of communication (of meanings). He suggests that the asymmetry of the part-whole relationship can be overcome by communication, which externalizes meaning from the individual by signification.

The idea of part-whole is inappropriate to explain the role that humans play in the operation of a social system. Traditional systems thinking might see the individual human being as part of a group, which is part of an organization, which is part of a subsystem like the economy, which is part of society. And yet the part-whole relationship is no longer adequate. Also, the relationship between the economic system or the education system with each other and with society differs from part-whole.

Luhmann and Parsons both discuss social systems within society, but while Luhmann considers society to be a nondescript environment, Parsons discusses how certain subsystems contribute to the functioning of society as a whole.

To Luhmann, human beings are not part of any system, nor even part of any conversation so that, curiously, not only is society the environment within which people operate, but people are the environment within which society operates, so that people can change society as well as society, people. This echoes, rather than solves, the fundamental problem above of social systems, of X within Y within X. Traditional systems thinking does not seem fully capable of addressing this.

Habermas (1987) discusses how system and lifeworld relate to each other. It is tempting to see society as a system: as a whole. Society-as-system has subsystems, e.g. the economy, and these may themselves be seen as systems that transform inputs into outputs.

Both society-as-system and its subsystems maintain themselves but the notion of autopoiesis is not sufficient, because it assumes a biologically-relevant environment. What is their environment? Perhaps the lifeworld. And yet, the relationship between society-as-system and lifeworld is not of the usual systemic kind, in that system rationalizes the lifeworld to become its subsystems, which is destructive of lifeworld.

There are other problems. Systematization of society leads to loss of meaning – and hence society-as-system lacks purpose. Habermas recognises that religion has previously accorded meaning, but with the supposed demise of religion, tries to find some other account. Habermas, however, ends up near a reductionism, of all human social activity to communication.

If we are to find insights about systems thinking from considering society as system then many of its cherished ideas must be modified, perhaps radically. But it is not yet clear how the two streams can be harmonized.

2.4 Overview

This shows the huge variety of thought in systems thinking. How may we understand it all? Many questions have been raised in discussing the streams of systems thinking, some of which are ‘elephants in the room’ – problems that have yet to be recognised and then addressed. Whereas systems theorists might try to resolve each problem piecemeal, it might be more interesting and beneficial if we can find a foundational approach which addresses most of them together.

On what fundamental basis is it valid to hold that the various characteristics of systemness are all important — wholeness, part-whole relationships, purpose,

environment, emergence, self-regulation, transformations? On what fundamental basis might it be proper to bring the two meanings of 'system' together, as their etymology would suggest should be possible?

Soft systems thinking seems to provide a partial answer to this question, in human subjectivity: it is human subjectivity that decides what is a system and where its boundaries are. However, this is not entirely satisfactory, in that it does not give any substantial meaning to systemness; it is merely one of those myriad of things that emerge from human subjectivity, and there is no answer to what dfferentiates systemness from, for example, beauty or preferences. And, as we have already seen, SST is not good at accounting for structures.

Dooyeweerdian Thought

If we ask that question, we find that most systems thinking discourses make the presupposition, rooted in Greek thought, that Being is the most fundamental state and that systems are primarily Beings. Dooyeweerd argued that this presupposition is fundamentally detrimental to philosophy and the various disciplines and that instead, it is better to conceive of Being as rooted in Meaning. "*Meaning*" wrote Dooyeweerd (1955,I,p.4), "is the *being* of all that has been *created* and the nature even of our selfhood."

3.1 Meaningfulness As Starting-Point

It is meaning, or as I shall call it here, *meaningfulness*, which makes systemness possible, and it is from an understanding of meaningfulness that we can understand and situate, and even integrate, most of the discourses of systems thinking.

Though meaningfulness refers to a Divine Origin of Meaning (Dooyeweerd 1955,I, 4), this meaningfulness is not 'imposed' directly by a Deity, but rather is a gift from the Creator to enable Creation to function with dignity.

Meaningfulness is something we and all things 'dwell within', rather than a property of things (Polanyi & Prosch 1975). "We have been fitted into this coherence of meaning with all our modal functions" (Dooyeweerd 1955,i, 4). A useful metaphor might be than of an ocean, in which fish swim and corals exist, but which also is the very thing that enables fish to swim and corals to exist. So meaningfulness is an 'ocean' within which all reality 'swims' and 'exists' or dwells, and which enables reality to 'swim' and exist. It is similar to Heidegger's

insight that being is a dwelling within a world comprised of other beings, but here the dwelling is within meaningfulness rather than just among other beings that constitute the environment, and it is meaningfulness that enables both the system and its environment to exist and occur.

This meaningfulness is diverse, and Dooyeweerd delineated fifteen distinct ways of being meaningful, which he called aspects or spheres (quantitative, spatial, kinematic, physical, organic, psychic, analytic, formative, lingual, social, economic, aesthetic, juridical, ethical, pistic). As Basden (2008) explains in its Chapter III, all being, functioning, normativity, possibility, rationality, relationships, etc. can derive from meaningfulness and in diverse ways and of diverse kinds. Each provides norms that lead to overall good; for example the economic aspect directs us towards frugality, and the juridical aspect towards justice.

Each aspect is innately linked with others, by relationships of dependence (e.g. social functioning depends on lingual), and analogy, by which each aspect contains echoes of all the others (e.g. the ideas of growth of an organization or economic growth are meaningful by analogy with the organic aspect but are not governed by its laws). Beware of analogy; it is subtle and may lead astray, as can be seen in the economic area.

3.2 Reinterpretation of Systems Concepts

This can help provide a new foundation for understanding systems. What follows are brief discussions of how each of the characteristics and problems of systems thinking may be reinterpreted (affirmed, critiqued and enriched) by Dooyeweerdian thinking, and how the main streams of systems thinking may be brought together.

System within Environment.

All systems exist and function within an environment, but this has two, not one, sides. Not only is there the fact-side of the system and all co-existing things with which it interacts, but there is also a law-side, which is the ocean of meaningfulness within which both system and its environment 'dwell' and enable them to be system and environment. From the perspective of meaning, there is no asymmetry between the beings of the system and the world.

Environment and its Diversity.

From the perspective of the law-side, environment is inherently of diverse kinds. We may identify a different environment with each aspect:
– a spatial and kinematic environment that surround the system;
– a physical environment, with which it exchanges physico-chemical materials;
– an organic environment for living things as an ecology of other living organisms;
– a sensory environment for animals, of seeing, hearing, feeling and motor responses;
– an analytic environment for human individuals of distinct concepts and ideas;
– a formative environment for humans, of artefacts and technologies, which individuals shape by formative power;
– a lingual environment, of messages, literature and bodies of recorded knowledge or information;
– a social environment, of relationships, roles and institutions;
– an economic environment, of resources and their production, management and consumption;
– an aesthetic environment, of enjoyment and harmony;
– a juridical environment, of justice and injustice, and their expression in laws and social norms, and the means of maintaining them;
– an ethical environment, the attitudes of self-giving generosity or self-centred competitive defensiveness that pervades society;
– a pistic environment, of prevailing beliefs, presuppositions, aspirations, commitments and views of what is ultimately meaningful in life.

Wholes (Systems as such).
Dooyeweerd's theory of entities provides a sophisticated notion of a whole as a multi-aspectual thing. The being of the whole is its meaningfulness in each aspect. Thus a poem, *qua* poem, must have an aesthetic aspect, also a lingual aspect, and a physical aspect of medium, a formative aspect of structure, and is usually better if it is frugal rather than wasteful in word-use (economic norm). Thus any system-as-whole can be understood an a coherence of multiple spheres of meaningfulness, a different aspectual profile of coherence for each kind of system. That profile, Dooyeweerd called a *structure of individuality*, in that by it we could meaningfully describe each individual of a kind, and it also guides the individuals in their becoming and destiny.

Emergence, at least of the strong kind, may be understood as viewing the whole from the perspective of a later aspect, for example the organic rather than the

physical. That is the ‘smuggling in’ of meaning.

Purpose of a System.
Purpose is to do with meaningfulness. Under Dooyeweerd, the purpose of a system is the aspect that most makes the system meaningful overall, as enabling what is good for the system; for example, biotic for living systems, economic for businesses. The multi- aspectual nature of systems suggests mutiple purposes, but there is one aspect, the *qualifying aspect*, which most clearly defines and guides the destiny of the type and which the functioning in all other aspects serves. There is also a *founding aspect*, which most clearly speaks about its coming-into-being. System purpose, then, is no longer a problematic notion.

System boundary.
It is this profile that offers a basis on which to delineate and understand system boundaries. Just as there may be many environments, and each system is multi-aspectual, it would be natural to expect multiple boundaries of a system. Checkland’s (1981) fence-painting system is bounded spatially by the extent of the fence, but is bounded socially by the neighbourhood of those who will see and appreciate the fence, and bounded economically for example by the budget set for or by the painter. This can raise and answer the questions that Midgley’s (2000) discussion of boundary omitted: how do we understand the concerns, and identify stakeholder groups, from which choices of system boundaries arise. This can then inform his discussion of the processesrelated to boundaries.

Weltanschauungen in Human Activity Systems.
Checkland’s notion of *Weltanschauungen*, by which different people hold different views on what is the system, can be understood as a person’s view that certain aspects are meaningful while others are less so. Indeed, Checkland explicitly defines the *Weltanschauung* as “that which makes the system meaningful”. For example, the finance department of a company would adopt an economically-qualified *Weltanschauung* while the Directors of the company might adopt a pistically-qualified *Weltanschauung* (Mirijamdotter & Bergvall-Kåreborn 2006). In this way, Soft Systems Thinking retains its sensitivity to subjective assignment of value but need no longer be arbitrary. Moreover, since each aspect provides an inherent normativity, Soft Systems Thinking might obtain a normativity that it hitherto lacked (Basden & Wood-Harper 2006). *Disclosive Systems Thinking* (Strijbos 2000) is similar to SST but puts normativity central, recognises its diversity and tries to disclose it. Dooyeweerd’s aspects may be employed in such

disclosure (Goede et al. 2011).

Relationships between Wholes (Systems).
Wholes function as subject in the various aspects, in subject-subject and/or subject-object relationships. Whether it is a subject or object depends, not on the whole itself, but on how it functions in each aspect, and a system may be both subject and object in different aspects (Basden 2017). Thus, for example, when an animal climbs a rock for vantage (Gibson 1979) the animal functions in the psychical and physical aspects as subject, while the rock functions as subject in the physical aspect, by being rigid and offering friction, but as object in the psychical aspect, by affording climbability. On the other hand, two animals might mate or eat each other, both functioning as subjects in the organic aspect.

Part-whole Relationship.
Dooyeweerd differentiated the part-whole relationship from what he called enkaptic relationships. The relationship between a hermit crab and the shell it has found and made into its home, is one of *subject-object enkapsis*, not part-whole. The relationship between a town and its orchestra or university – and maybe between society and its various Weberian subsystems – is one of *territorial enkapsis*. The relationship between trees, insects, fungi etc. and the forest is one of *correlative enkapsis*, whereby the denizens generate the forest that enables them to exist. The relationship between society and human beings is one of correlative enkapsis, not part-whole. The *part-whole* relationship is that in which the part, *qua* part, has the same qualifying aspect as the whole but, independently of the whole, has an earlier qualifying aspect. Thus a lung is qualified by the biotic aspect only as part of the animal, but, when functioning on a bench, is qualified by the physical aspect of filtering and absorbtion.

Autopoiesis and Self-maintenance.
Autopoiesis is primarily an organic concept, referring to how organisms maintain their organic integrity in an environment with which they exchange physical materials. By analogy, it has been extended to, for example, how organizations maintain themselves as organizations, and society maintains itself. However, the mechanisms by which plants, organizations and society maintain themselves differ and must take into account the different qualifying aspects of each. Autopoiesis and self-maintenance are usually discussed and studied by reference to their *processes*, but Dooyeweerd would suggest that we focus on their *meaningfulness*, because this is what defines most clearly what is to be maintained. For example,

in a plant, the self-maintenance is deemed successful as long as it stays alive (organic aspect), while to a business, self-maintenance is deemed successful by reference to its economic aspect (usually encoded into company law as conditions for going into insolvency). This suggests that any general theory of self-maintenance is incomplete without explicit reference to the qualifying aspect of the system concerned, and probably other aspects of its structure of individuality.

Social Systems.

In social systems, each system is also part of the environment of other systems, which can be a problematic idea. Instead of trying to define system-environment relationships, Dooyeweerd would suggest thinking about how both systems are enabled in their very existence and functioning by the 'ocean of meaningfulness' within which both operate and which enables both to exist and function. Luhmann's conundrum that people are within society but society within people, is also resolved as follows: "society within people" refers to people functioning in the aspects that make "society" meaningful, especially the juridical, ethical and pistic, while "people within society" refers to correlative enkapsis in certain aspects as outlined above.

Society as System.

Society is not an entity in the sense discussed above, of being defined by a structure of individality. Instead it, like a forest, is an *Umwelt*, which exists by virtue of *correlative enkapsis*, as a co-generative interplay between itself it its denizens. Though a forest functions primarily in the quantitative to psychic aspect, because those are the aspects in which its denizens function as subject, society functions in all aspects, because in all aspects human individuals function as subject and its functioning in each aspect is a subsystem thereof: its economy (economic aspect), education (lingual), judiciary (juridical), etc. In the ethical aspect, the 'subsystem' may be society's pervading attitude and in the pistic, its prevailing beliefs and presuppositions. Society may even be said to function in the physical and organic aspects if we take such issues as climate change and deforestation into account as societal phenomena. The supposed subsystems of society- as-system, such as the economic and educational systems, are not related by part-whole, but by territorial enkapsis. The self-maintenance of society is no longer by some subsystem of a viable system model, but by the functioning of its denizens in correlative enkapsis.

System and Loss of Meaning.

Habermas (1986; 1987) argued that system implies loss of meaning because it operates by mechanical rules. But this is unhelpful on two accounts: there is no necessary complete loss of meaning, and loss of meaning occurs by something other than rationalization. 1. This might be the case if all meaningfulness is only generated *ex nihilo* by attribution and signification of people, but if meaningfulness is an ocean within which all operate, then even the mechanical rules exhibit meaningfulness. At the least, as Geertsema (1992) points out, there is formative meaningfulness in the rules and there is probably some juridical meaningfulness in that many rules 'make sense' in terms of justice, as well as economic meaningfulness in how resources are used, and aesthetic meaningfulness in that many rules are about maintaining harmonization. The problem of mechanicality of the rules is no longer to be seen as loss of meaning, but rather as an undue elevation of one aspect of meaningfulness, usually the formative aspect of achieving things or the economic aspect of efficiency. 2. Loss of meaning arises from other aspects being omitted or ignored. Since meaning always involves referring beyond (Dooyeweerd 1955,I, 4,110), nothing and no aspect can exhibit meaning in itself, when isolated from the others and from the central totality. When aspect or an entity is absolutized this occurs, and complete loss of meaning results.

System and Lifeworld.
Under Habermas, lifeworld forms an 'environment 'for mechanical system, but not in the usual systems sense. Under Dooyeweerd, lifeworld is the stock of background knowledge about everyday life. Everyday living is a functioning in all aspects without any one dominating. Lifeworld is thus inherently multi-aspectual, in which no single aspect has any prior claim to dominance. It is thereby replete with the rich meaningfulness and the normativity afforded by each and every aspect.

Humanly-generated rules express the normativity of one or few aspects. System, as set of rules, is thus seen as focused on a single aspect (or few). Rationalization of the lifeworld is an attempt to apply the analytic aspect to it, to pick it apart and maybe reconstitute it, and as such it falls away into nothingness, not because it is fragile, but because this is inherent to this kind of functioning, which Dooyeweerd calls the *Gegenstand* (Basden 2011). Differentiation of society Separating out distinct ways in which society might function and institutionalizing those ways, which does indeed involve the analytic aspect, is not necessarily a bad thing.

Dooyeweerd discussed this at length, for example clearly differentiating society from the state, and this from the business, from the religious instution, from the family, etc. Each sphere of society is governed by a different aspect, and brings its own meaningfulness. Dooyeweerd argued that differentiation is inevitable if we are to disclose and open up the potential of the various aspects, for example opening up the lingual aspect with writing, drawing, printing, broadcasting and now ICT and the Internet. The problems that we experience with differentiated societal spheres lie not in differentiation as such but in the absolutization of various spheres (e.g. the economy) and the demand that other spheres serve it, and in the lack of attention to the inter-aspect coherence.

Conclusion

This essay has briefly reviewed three streams of systems thinking to reveal some of its deeper challenges. It has then outlined how it is possible to reinterpret many of the concepts of systems thinking from Dooyeweerd's perspective, in a way that retains the importance and thrust of each. No longer is 'system' taken for granted, but what systemness is has been exposed as rooted in meaningfulness. By moving them from their adherence to an existence presupposition, to a meaningfulness-oriented presupposition, each concept has been placed on a new foundation, has been replanted in fresh soil. The soil is in many ways more fertile, and so many of the concepts have been enriched.

This opens up new avenues for research and discourse in systems thinking. The problems identified in Section 2 might be addressed if the Dooyeweerdian approach were to be developed, and the various streams of systems thinking have been painted into a single picture.

This paper is only a start. It is all too brief in both its overview of systems thinking and which concepts are meaningful therein, and its suggestions for a Dooyeweerdian reinterpretation are only sketchy. Both are in need of further development.

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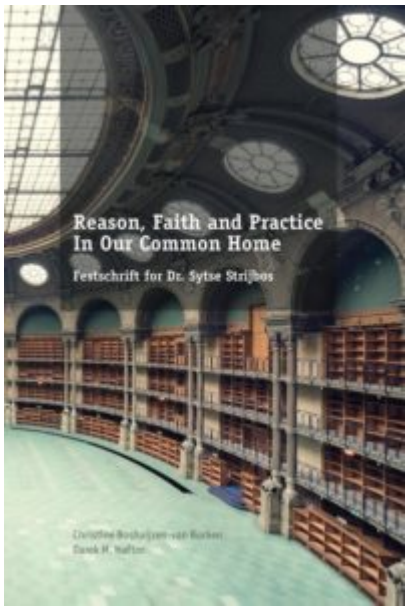
Reason, Faith And Practice In Our Common Home, South Africa ~ Festschrift for Dr. Sytse Strijbos



"No one can be clever and ecstatic at the same time." – Sir A Quiller-Couch

Introduction
Three elements of the overall theme, *Reason, Faith,* and the idea of *Our Common Home* are found in different cultural constructions or formations in the South African context. These formations have often combined or interacted with destructive results, and have at other times formed constructive, life-giving combinations.

Firstly, a few examples will be given of specific cultural formations and combinations of these themes. That will be followed by reflection on how we can arrive at constructive, life-giving combinations of these formations, with a practical example from the African context of what could be done. There are more factors that could be included in the mix that are not considered here.

The view of reason and "our common home" in the Verligte Beweging among Afrikaners

In the 1970's and the 1980's there was a movement in the Afrikaner-establishment that was called the *Verligte Beweging,* the Enlightened Movement, that reminds one of the *Aufklärung* in Europe. The leading figure of this movement was Willem de Klerk, a theologian and journalist and the brother of FW de Klerk, the leader of the National Party (NP). FW de Klerk was the person who, as president of the white minority government, officially declared that the policy of apartheid would be replaced by a full democracy, in a historic speech on 2 February 1990.

In a book about his brother FW that was published in 1991, Willem de Klerk stated that the basic concept of the Enlightened Movement was *togetherness* (gesamentlikheid), based on *reason as the natural law of the human soul*. He quoted the historian Barbara Tuchman's *The March of Folly* (1984): *"Rejection of reason is the prime characteristic of folly.... When desire disagrees with the judgement of reason, there is a disease of the soul. And when the soul is opposed to knowledge or opinion or reason, which are her natural laws, that I call folly...."* (De Klerk, 1991 pp. 130, 144-145).

Togetherness was seen as the opposite pole of separateness (apartheid), which was not rejected out of hand, sometimes for strategic reasons and sometimes, it seems, as a matter of principle. The idea was to find a balance between togetherness with other cultural groups and maintaining an own identity. Willem de Klerk described how this movement convinced the Afrikaner in general, and FW himself, to move their policy from the one pole (separateness) closer to the other (togetherness), and to leave apartheid behind. In his conclusion he talked of FW's *conversion* to the idea of togetherness based on reason (1991, pp. 145-146). This thought construction became dominant in Afrikaner circles at the time, and when it combined with the drive for reconciliation of leaders like Nelson Mandela and Desmond Tutu, a peaceful transition to democracy in a deeply divided country became possible, which led to a lot of optimism. This was a noteworthy

contribution!

Twenty-five years later this optimism is under a lot of pressure, but it is still alive. The question is if it was, and is, sufficient to put all one's confidence in reason as answer to all the movements of the human spirit in this turbulent country.

In his book Willem De Klerk presented his expectation of the way in which the five years after 1990 would evolve. On pp. 174-200 he presented an overview of the *seven* forces that would determine this period. He mentioned the difficulties that were to be expected: *four* situations that put pressure on negotiations (p 178) and *three* fault lines in the South African situation (p. 179). The powers that opposed reason were duly noted, counted and allocated their place in the bigger reasonable picture painted by Willem de Klerk. He looked all the difficulties and unreasonable ideologies in the eye and assured his readers that these forces could be contained by the processes of reason: by education, persuasion, negotiation, compromise. He was full of confidence that all would work out: economic realities would force all groups to find solutions (p. 187). With leaders like FW, he stated, it was quite possible. He even ventured that it was not far-fetched that FW could become president again in the next 10 years (p. 199).

It seems that the *Verligte Beweging* underestimated and consequently neglected the extent to which reason itself can be understood or constructed in different ways. What is reasonable to one is often unreasonable to another. And where Willem regarded reason and the economy as the binding forces that would keep all together, the African National congress (ANC) as ruling party expects minority groups to bow to the majority. The idea that the ecology is our and our children's common home hardly features.

On 27 April 1994 a government of national unity (GNU) was elected in a fully democratic national election. FW de Klerk became a member of the cabinet of president Nelson Mandela. Two years later and five years after his brother Willem de Klerk's book, he and the other National Party members withdrew from the GNU, complaining that the ANC refused to share power or to search for consensus in critical matters (Giliomee, 2004, p. 619). De Klerk's successor as leader of the once mighty National Party, Marthinus van Schalkwyk, became a member of their former arch enemy, the ANC, in 2004. The rest of the party followed about a year later. Van Schalkwyk was rewarded with a cabinet post and after serving as a minister for 10 years, keeping a very low profile, he resigned

from parliament when president Zuma left him out of his cabinet (Makinana, 2014).

And recently Dave Steward (2016), Chairman of the Board of Trustees of the FW de Klerk Foundation, wrote an article *Slegs "goeie" blankes (Only "good" whites)* about a ruling of the Constitutional court on street names in Pretoria. Steward warned that the ruling implied that all the cultural, economic, and other contributions of the whites in the history of this country are now in principle disregarded. He complained that the only legacy of whites in general that is recognised is oppression; individual whites who supported the struggle against oppression are the only "good" whites who may, in this case, have streets named after them.

It is noteworthy that Willem de Klerk, a *pastoral* theologian, worked with a rather simplistic anthropology that puts its ultimate confidence in reason. The anthropology of Christian theology, at its best, works with a very sophisticated and realistic anthropology that would have served him better. As example of the role that such a theology can play in the political arena one can refer to the contribution of Karl Barth after the Second World War in Europe. Barth did not reduce the complexities of life to neat rational categories. He did not work with a simplified anthropology. He always spoke as a theologian, and his theology and his view of political activity as a *"free, direct approach to human beings and their welfare"* is said to have contributed in Europe "toward breaking down ideological politics in favour of a more pragmatic and practical approach to problems of state" (Herberg, 1960, pp. 64-65, quoting Charles West).

Secondly, it is noteworthy that De Klerk, as *Christian* theologian, accepted Tuchman's view that *self-interest* should be the basis of reason: *"…if the mind is open enough to perceive that a given policy is harming rather than serving self-interest…and wise enough to reverse it, that is a summit in the art of government"* (De Klerk, 1991, p. 145, quoting Tuchman). Self-interest is a powerful force than can be directed towards positive goals, but unchecked and blatant self-interest, as is found in many sectors of society in the present-day South Africa, has destructive consequences such as rampant corruption, a growing gap between rich and poor and ecological devastation.

In April 2013 the prominent anti-apartheid activist Peter Hain, who later became a member of Parliament in Britain, wrote in a short article *My South Africa, riven*

by self-interest: "… ANC leaders now seemed to be preoccupied with corruptly enriching themselves at the taxpayers' expense, not sticking true to Mandela's values. 'They are looting the country,' ANC members told me time and again as I travelled around this amazing and beautiful country". There is wide agreement with this view of many ANC members. By 2017 the term state capture had become dominant in the public discourse on the role of the ANC.

The people of the *Verligte Beweging* did very little to present an alternative to self-interest. The same can be said of many Christians, even if the Christian faith proclaims service to others and the search for the common good, more than self-interest, as a basic motif to direct practice (cf Benedict XVI, 2009). The theologian Leslie Newbigin (1989, p. 229) says what is required of the church is to become a servant church, *'a community that does not live for itself but is deeply involved in the concerns of its neighbourhood'.*

What is needed is a life-giving combination of factors which achieve synergy through creative tension. It is important that reason and a measure of self-interest are part of this combination, but they are not sufficient on their own. The *Verligte Beweging* can serve as example of that. It was helpful to bring an end to apartheid but it was not sufficient to find a way after apartheid.

One reason for the failure of the *Verligte Beweging* is that it did not recognise that *"reason"* is not a given entity, it functions within a larger cultural framework or construct. To illustrate this point, a few cultural formations of reason are considered below.

Views of reason of some African writers in the 20th century
In this section attention is given to some African views of reason over almost a century, followed in the next section by a discussion of the tradition of resistance to Western concepts of reason.

In 1936 H I E Dhlomo (1936, p 232) wrote:
"Action! Rhythm! Emotion! Gesture! Imitation! Desires … The origin of African drama was a combination of religious or magical ritual, rhythmic dances and the song. These ceremonies were based on what anthropologists call Sympathetic Magic… The dances were rhythmic and expressive; the songs emotional and devotional…."

In another article, Dhlomo (1939, p. 89) rejected rhyme as a *"suitable outward*

form" for the *"emotional content"* of African poetry. He quoted Sir A Quiller-Couch who said *"No one can be clever and ecstatic at the same time"*. Taking Hebrew poetry and Shakespeare's later works as examples, Dhlomo propagated the use of rhythm as the form best suited to the African genius. This comparison seems to point at a unifying transcultural formation in which people from different cultural backgrounds can feel at home, although one must remark that Hebrew poetry and Shakespeare's later works were, if anything, clever and/or inspired rather than ecstatic.

Dorsinville (1976, p. 70) stated that the famous poet from Senegal, Leopold Senghor *"himself says that meaning is less dependent on discourse, analysis, linear thought than on breath, rhythm, sensibility".*

The following statement by Ibe Nwoga (1976, p. 26) may also find some correlation with certain Western schools of thought, such as phenomenology, which will be discussed below:
*"My understanding of the issue is related to a distinction between modes of knowing – that whereas traditional western man has evolved a more detached, analytical mode of understanding of his world, environment and aspects of human functioning, traditional African man retained a more holistic, instinctive mode of understanding**....** I try various expressions to describe this mode – spiritual absorption, instinctive perception of whole meaning, sensitive interaction – but these are words that have their meaning in the language of a cultural mode of perception which is particular and rationalistic. The total of these expressions, however, comes close to what I mean, for which the word rapport may be used… (if) the African should be found to have a predominating tendency towards this type of knowledge, then it should be recognised, not indeed as exclusive, but as characteristic".*

Other statements suggest that the cultural gaps may be deeper, that correlation may not be found so easily. In 1964 the well-known South African literary scholar Ezekiel Mphahlele (1964, p. 221) wrote: *"It is significant that there is much more creative writing than scholarly prose by Negroes in Africa. Perhaps it is because a poem or short story or a novel is so close to individual experience, and therefore more natural modes of expression than argumentative prose; and further, because intellectual systems and the arguments involved are not natural to Africa."*

And the philosopher K C Anyanwu (1984, pp. 87-93) wrote:

"The unity of the self and the world, mind and matter, is something magical because it defies any rational understanding. We can only say that the self and the world interpenetrate each other in such a way that we do not know where the self begins and ends for the world to begin …. the West seeks rational causality in all things. What happens if nature is alive, if spirit permeates the whole universe, if consciousness cannot grasp the factors of causality? Effects would then be interpreted as magical and so also the method…. Magic raises up the question of causality …. the whole truth about cause is magical, that is, it belongs to the non-material world."

The word "*harmony*" is often used to describe the African worldview. The Ghanaian writer Kofi Awoonor comments as follows on Chinua Achebe's book *Things fall apart* (first published 1958): *"To Achebe, the African world before the arrival of Europe was a well-integrated one, with dignity and honour*". In spite of contradictions and struggles *"the search goes on inexorably for that fundamental harmony on which their cosmic destiny rests*". It is this "*pristine integrity*" which has been *"traumatically shattered… (by) the tragic encounter between Africa and Europe…"* The first *"seeds of havoc"* are planted with the coming of the Christians: *"Order and coherence are followed by that slow, imperceptible and disguised process of decay*" (Awoonor, 1976, pp. 252-254).

African Traditional Culture is still alive and powerful. In August 2016, two church ministers submitted their doctoral theses in Theology with me: rev Simon Munyai of the VhaVenda in South Africa, and rev Peter Nyuyki from the 'Nso in Cameroon. Independently from each other, both state that the missionary era has passed, that the missionaries from the West did not understand their particular culture and religion, and that the African church now has the task to develop a meaningful relationship between their traditional cultures and the Christian faith. Both use the word *harmony* to describe their African worldviews: Munyai (2016, p. 70) states that healing is regarded by the VhaVenda of South Africa as an act of reconciliation by God, who brings order, stability and harmony to the whole universe. Nyuyki (2016, p. 177) states that in the worldview of the Nso' people, the self and the phenomenological world are inseparable because the Nso' people experience life in harmony with nature. The universe, for the Nso' people, is not static, inanimate or dead. *"The worldview of a people and their ways of worship tell us how they see and conceive the cosmos and interpret the things and events around them. That of the Nso' people like most of Africa is imbedded in music and*

dancing, fellowship, corporate living, their traditional religion and socio-economic and political organisations."

This relation to reality is threatened by Western forms of reason and Western education, which leads to resistance.

Resistance to Western forms of reason
In 2015 and 2016 there have been major incidents of burning down of schools in the Vuwani district, a rural area in the province of Limpopo, and buildings on the Mafikeng campus of the University of North-West and at the University of Johannesburg. At the time of writing this article, news reports are still coming in on more campus violence, specifically the burning down of buildings and vehicles.

In a news report, "*'Let the schools burn, let them burn!' – Vuwani resident*" Lizeka Tandwa (2016) quoted a police officer who said that 20 school were burned and four damaged in this rural area. This happened when protests broke out about plans that the area would fall under a new municipality. Damage was estimated at more than R500 million (Whittles 2016).

In comparison, a house of 200 m^2 with a decent garden in an upper-middle class suburb can be bought for under R2 million.

In Vuwani, local *politics* triggered a spontaneous mass action by the communities who then turned against the *education* facilities of their children. On several university campuses there were also incidents where buildings were burned down, sometimes in mass protests about different complaints (North West University Mafikeng campus) and sometimes in secret at night (University of Johannesburg). Minister Blade Nzimande (2016) detailed the cost of student protests to university campus properties around SA, saying the total between October 2015 and June 2016 stood at R459.8m.

The question that many ask is: Why do people burn down schools and university buildings?

One factor could be that resistance to Western forms of reason has a long history in South Africa.

In the 1920s the church leader Isaiah Shembe broke away from the missionary churches in search of an own identity. One of his reasons was the suppression of

oral traditions by the epistemological and cognitive authority of the Western tradition of print (Brown 1998, 124).

The mass actions that started in Soweto in 1976 led to the introduction of a fully democratic constitution for South Africa in the early 1990's. These uprisings were, especially in the early years, inspired by Black Consciousness with its slogan: *Black is beautiful!* The leading figure in this movement was Steve Biko, who was beaten to death my security forces in 1977 at the age of 31. Biko was not opposed to education and reason. He was also not anti-white. *"Steve Biko did more than any other political leader to form a political movement whose primary aim was to challenge the intellectual foundations of European modernity while engaging with that modernity itself through the weapons it had itself furnished"* (Mangcu 2012: 34, 39). He took his arguments to some of the most exalted academic forums in the country (Mangcu 2012: 178).

This objection to Western rationalism can be compared to responses to high levels of rationality in human history such as the Romantic movement in the West (Mangcu 2012: 273-2750).

However, by 1974 Biko was losing his grip on the movement as it became more radical and activist (Mangcu 2012: 192, 193). The movement raised the political consciousness of students and on 16 June 1976 demonstrations by school children led to violent responses by the police and the burning down of schools and other government property by the students. This was followed all over the country by frequent incidences of the burning down of schools and university buildings, and other buildings, which still flare up from time to time. It is often interpreted as expressions of political frustration, but there was also resistance against *"Western values"* such as individualism, a resistance that was repeatedly expressed, inter alia, in popular slogans such as "Pass one, pass all!" at universities.

Toyi-toyi, which is rhythmic dancing and singing by groups of advancing protesters, is the most prominent traditional cultural form during mass protest demonstrations. It has played a major role since the time of the struggle against apartheid, and it is still prominent in mass protests by communities, trade unions, students and others. Toyi-toyi is described as *"the war dance of black South Africans"*; a resident said it can be seen as South Africa's 12th official language, *"since it's nearly as old as the country itself and everyone knows it, including the*

government." It is very effective to give the protesters courage and to intimidate the authorities. *"Toyi-toyi is a powerful and infectious statement, by which the oppressed may voice their grievances to the government*" (Nevitt, 2016).

Toyi-toyi does not make a rational statement. It is rather ecstatic than rational. Sometimes it is combined with the processes of reason that were described by Willem de Klerk: by education, persuasion, negotiation, compromise, written submissions. In some circles, however, political protest that was expressed in a literate form was regarded with suspicion because the literate form itself was seen as foreign to African identity. Traditional oral forms at times involved *"a return to the ancestral source*", cyclical construction, parallelism and repetition (Brown, 1998, pp182-185). The oral form expresses another relationship to the world than the relationship that is expressed in literate forms. Brown quotes the literary scholar, Michael Chapman, who wrote in 1984:
"Underlying such an approach is the vision of an African anthropomorphic universe wherein all relationships – from God to the ancestral spirits, through man to the animals and plants – are mutually co-existent. It is a universe which evinces beauty-in-harmony; it is (to quote Senghor) 'a dictionary, a web of metaphors, a vast network of signs' and is characterized by the depth and intensity of affective life. Thus artistic technique, in its attempts to express rhythmic essence, is at the same time felt to be an ethical principle; the poet, by chanting his poem, gives audible substance to those life forces which, according to African ontology, are deemed to emanate from God and are Being – for Being is Force, Life is Energy. As far as the poet is concerned, therefore, the ideal (again to quote Senghor) is 'total art', in which a world of static appearances gives way to one of dynamic realities; 'imitation is superseded by participation, the master-word of Negritude." (Brown, 1998, pp. 193-194).

This search for participation, (rapport – Nwoga, fundamental harmony – Awoonor) rather than control of nature through reason, which is pivotal in the modern West's belief in progress, was one of the inherent motives in the struggle against apartheid: it was more than political protest, it was also a search for an African identity. Toyi-toyi can be interpreted as one such an oral form that expresses a rhythmic essence and an ethical principle that are rooted in African ontology.

A more recent development on university campuses is the movement for the decolonisation of the university system. It includes the burning and vandalising of "colonial" art works, libraries and buildings, but there are also academic debates

about the diversification of epistemology, bringing marginalised groups, experiences, knowledges and worldviews emanating from Africa and the Global South to the centre of the curriculum, challenging the hegemony of Western ideas and paradigms and foregrounding local and indigenous conceptions and narratives. At the University of Pretoria a copy of a book, *Decolonising the University. The emerging quest for non-Eurocentric paradigms*, was circulated electronically in 2016. In the Forword with the heading *'Our universities are the purveyors of an imperialist worldview* SM Mohamed Idris writes:
"Our universities are the purveyors of the imperialist worldview and ideology. They play the role of perpetuating Western hegemony through their education models that are so destructive to our culture, language, way of life, knowledge systems and dignity.

To achieve true liberation and recover our authentic selves, we need to purge the West that is within us.

….Even at our universities, to bring about such a change would be seen as a radical exercise. So steeped in our psyche is the Western hold that to think in any other way is unimaginable for fear that we end up in poverty and backwardness – as if there were no other civilisation before the coming of the colonialists".

The reference to "*our culture, language, way of life, knowledge systems and dignity*" and a civilisation that is not Western indicates that the drive for decolonisation cannot be understood fully by using Western insights, for example that it is merely a search for power or that it is frustration with the struggle to get funding to study at existing universities. It may be such things, but it is more.

It is interesting that Idris names Al Jazeera as example of what should be done; it shows that his view of reason may be quite compatible with at least some Western schools of thought.

There are also political motives for attacks on Western education. In Martin Meredith's book *The state of Africa* (2006) there is a chapter, *The coming of tyrants*, in which he describes the two decades after political independence. It was an unstable period, marked by a high number of coups. The educated were often the target of violence by political leaders. In Zanzibar, Abeid Karume came to power through a coup; he was distrustful of intellectuals and executed some of his advisors (p. 223). In Uganda, Idi Amin "*…took sadistic pleasure in humiliating*

officials, usually men with wide education and experience, for whom he held an instinctive distrust" (p. 237). In Equatorial Guinea, Francisco Nguema took power. *"Given unlimited powers to arrest, torture, rape and murder, Nguema's security forces wreaked vengeance on the country's educated classes…"* (p 240). In Ethiopia, under Mengistu Mariam, *"…armed gangs hunted down students, teachers and intellectuals deemed to be 'counter-revolutionaries'"* (p. 246).

In May 2000 a newspaper reported: *"Mugabe thugs target black professionals"* (Makhanya and Malala, 2000, p. 1). *"Teachers, nurses and other professionals have been subjected to sustained abuse by supporters of President Robert Mugabe's Zanu-PF party, raising fears of a repeat of the '80s 'Gukurahundi' (wipe out everything) campaign. Then, teachers and other professionals were among the first targets in a campaign of terror in which 20 000 people were murdered, many of them by being buried alive".*

I could not find evidence that this level of violence against educated people or academics has been prominent in Africa in recent years. There are, however, political leaders who do show anti-intellectualism. Recently, the political columnist Prince Mashele (2016) wrote in the influential newspaper Sowetan: *"African leaders don't like the idea of an educated populace, for clever people are difficult to govern. Mandela and Mbeki were themselves corrupted by Western education. (Admission: this columnist is also corrupted by such education.)….Zuma remains African. His mentality is in line with Boko Haram. He is suspicious of educated people, what he calls "clever blacks". Remember that Boko Haram means "Against Western Education*".

Linking the South African President's remarks about *"clever blacks"* to Boko Haram is ominous, but Zuma's remarks as such can also be compared to the remarks of, for example, some leaders of the Republican Party in the United States, cf the article by an experienced person in American politics, Max Boot (2016): "*How the 'Stupid Party' Created Donald Trump*". According to Boot, Republicans have often distanced themselves in their rhetoric from intellectuals, in order to attract a certain section of voters: *"Rather than run away from the anti-intellectual label, Republicans embraced it for their own political purposes."* Boot quotes a certain William F. Buckley Jr. who said, *"I should sooner live in a society governed by the first 2,000 names in the Boston telephone directory than in a society governed by the 2,000 faculty members of Harvard University".*

To conclude: in Africa, resistance to Western forms of reason is expressed in different ways, from engaging Western intellectuals in their own terms to violence against intellectuals, from the destruction of educational facilities to the academic debates in African philosophy and the recent movement for the decolonisation of universities. It also has different motives in different cases, such as the need to express *"African ontology"*, the need to *"recover our authentic selves"* and the desire to maintain political power. It can be radical and destructive but it can also be moderate and constructive.

Movements in the West that challenge the hegemony of reason
The modern age, where reason and science are central, is traced back to Descartes' *"I think, therefor I am"*.

Descartes set the human soul apart from the body and the world itself, a dualism that has plagued Western thinking over the centuries. Blaise Pascal (1623-1662), a younger contemporary of Descartes, presented another form of dualism, the dualism of *methods*: he made a distinction between *esprit de géométrie,* the method of natural science, and *esprit de finesse,* the sensitive disposition of the heart (*"gevoelige instelling…van het hart"*), which is more than the difference between reason and emotion. *Hart* means for Pascal: feeling, sensing, intuitive knowledge (Van den Berg, 1973, pp. 11 – 19).

There is a tradition in the West, especially in the English world, to see only natural science as science. There is an equally long tradition of resistance to this notion. In the 19th century a brand of psychology was developed that used only the methodology of the natural sciences. This tendency was resisted by people like Percy B Shelley, whose *In defense of poetry* was published in 1840. He made a distinction between *reason*, that builds up the whole out of the parts, and *imagination,* that understands the meaning of the parts from the whole. This view stands in the tradition of Pascal who spoke of the truth of the head and the truth of the heart. Wilhelm Dilthey (1833 – 1911) made the same distinction: psychology can understand something like sorrow after the death of a child by using the methods of natural science to describe aspects such as the ensuing emotions and physical processes, or it could understand the sorrow by using the methods of the *Geisteswissenshaften,* giving attention to the relations in which the child existed and what its death means in the whole context in which it was living. Both methods are valid in a discipline such as Psychology. The insight that

Psychology must not only attend to the individual as isolated object, but as a person in relation to others, led to the understanding of the importance of culture and the cultural formations of human identity (Van den Berg, 1973, pp. 40-44, 79).

This approach is expressed in Phenomenology. Emmanuel Levinas (1906-1995) was also in this tradition: for him, being in direct relation with the Other is the basis of all truth (Peperzak, 2007, pp. 97-99).

The question is how compatible the moderate and constructive forms of resistance to Western forms of reason in Africa are with movements in the West that also challenge the hegemony of reason.

Convergence between African and Western concepts of reason?
The interaction between Western and African ways of thinking that has been going on for centuries has brought about different possibilities.

The first question is whether the Western tradition that claims a place for Pascal's *esprit de finesse,* the sensitive disposition of the heart as a way of knowledge, and perhaps even some debates in quantum physics about causality and about the impact of the observer on what is observed can be related to some of the ideas of African writers. Can Levinas' view that knowledge is found in direct relation with the Other be compared to Nwoga's *"rapport"* for example? Such questions are not debated here, attention is rather given to what happens in practice. It can be noted, however, that Nwoga's warning that the African way of understanding cannot be described by *"words that have their meaning in the language of a cultural mode of perception which is particular and rationalistic"* may also apply here.

One possibility of what may happen is that mutual influence may bring the traditions closer to each other. Half a decade ago, the well-known writer Es'kia Mphahlele (1964, p. 231) wrote: *"We seem to forget that our neo-African culture, by its very nature, is going to absorb much more of European techniques – a process that should not worry us, really: our writing can only be valid if it interprets contemporary society in a mode of expression that hits on the intellectual, emotional and physical planes of meaning".*

Many African and Western people can agree with Prigogine (1984, pp. 34-5) that modern science has been remarkably successful in unlocking the secrets of nature

and in utilizing the potentialities of nature through a strong emphasis on the superiority of reason. But this emphasis has had a reverse side: scientists tended to dismiss all the non-rational, yet vital elements of human life and reality, such as the destiny of humanity, human freedom and spontaneity.

A very important opportunity – and need – for the different ways of thinking to interact and find synergy is presented to us by the practical problems of everyday life. The Nova Institute has been engaging in trans-disciplinary research where researchers from different disciplines and people who are in the actual situation put their heads together to search for meaningful solutions to concrete problems that the people in the particular situation is struggling with. Klein (2001) describes this approach well: *"The core idea of trans-disciplinarity is different academic disciplines working jointly with practitioners to solve a real-world problem".*

Real-world problems in South African communities are huge and complex, and they are almost always trans-cultural in nature. The problems emerge when elements from different cultures interact, a continuous process where these elements meet and mix, seek each other out, attract and/or repel each other, combine and clash, merge and break up. There is chaos but also patterns that emerge.

It becomes a problem when the combinations that form are destructive. In order to understand what is going on and to develop life-giving combinations, a combination of insights from al the cultures that are involved is needed, from within different scientific disciplines, as well as the insights from the people in the situation, who know the practical situation from the inside. Western ways of thinking and African ways of thinking all contribute to get a grasp of the complexities of every day processes and practices in households and communities, such as practices to produce and prepare food and to care for vulnerable children.

The desired result of the trans-disciplinary process is that a life-giving domestic practice emerges or is designed that is functionally integrated into the given context. Nova sees a domestic practice as a set pattern in which different household members play different roles, making use of artefacts and products, to satisfy a fundamental need. A technical solution or artefact will only be taken up and used in daily life if it has become part of a domestic practice. It is not the

technical solution on its own that is needed, it is the practice as a whole that must be developed.

In the African context, African Traditional Religion and the Christian faith form different combinations that play a pivotal role in many people's decisions about everyday practices, for better or for worse. One of the factors that hamper the potential contribution of the Christian faith is the gap between faith and practice in Christian circles.

The gap between faith and practice in Christian circles
In his book *De eeuw van mijn vader* Geert Mak (2009, pp. 105, 106) relates some events in Reformed circles in the Netherlands around the year 1920. The focus was on the implications of the natural sciences for the Christian faith, but, says Mak: *"Here and there people whispered the name of a Swiss theologian, a certain Karl Barth, who taught that theology and every-day life should be integrated with each other"* (My translation. The original reads: *"Hier en daar fluisterde men de naam van een Zwitserde theoloog, een zekere Karl Barth, die leerde dat theologie en het leven van alledag in elkaars verlengde lagen"*). Whispered? Is it not most obvious that theology and life, that faith and practice should be integrated with each other?

Something similar happened in Evangelical circles. According to Black (2016: 59, 60, 62) the church connected evangelism and social responsibility for most of its history. However, that changed for the evangelical church between the years 1865-1930. In this period the evangelicals' interest in social concerns had, for all practical purposes, been obliterated and the social conscience of an important part of American Evangelicalism atrophied and ceased to function.

The Reformed tradition in the Netherlands and American Evangelicalism are both later fruits of the Reformation. In 1938 Karl Barth wrote an essay *Rechfertigung und Recht* (Justification and justice; translated as Church and State). Barth said that the Reformers did not set out what the *"inner and vital connection is between the service of God in Christian living … in the worship of the Church as such, and another form of service, which may be described as a 'political' service of God …"* (1960, pp. 101–102). The *'political'* service of God refers to the affairs of human justice and every-day life. If there is no inner connection between the 'political' service of God and the service of God in the worship of the church, it would be possible to build a highly spiritual message and a very spiritual church with a

message that *'has ceased to seek or find any entrance into the sphere of these problems of human justice'*. On the other hand one can build a very effective society which has lost contact with the vital values and direction that we as humans cannot provide for ourselves.

In his book *Metabletica van de Materie* JH van den Berg (1969, p. 206 ff) provides a gripping description of the earlier antecedents of this gap in the spirituality of the West, where the church started to define faith as turning away from the world into one's inner experience, such as mysticism and the ascetic movement around the year 1 000 A.D.

Africa has not gone through this process of the secularisation of every-day life. But still, the privatised, inner spirituality that was imported by the missionaries may explain the widespread dilemma that the church is growing strongly in Africa, but with little impact on the urgent questions of the continent, such as poverty, violence and corruption. It is well illustrated by the experience of Brian McLaren in 2004 when he attended a gathering of 55 young Christians, mostly from Rwanda and Burundi, after the violence in which more than a million people died. One of the people at the conference said that he had attended church all his life, and he had only heard the message of future personal salvation from hell – no mention was ever made of the hatred and distrust between tribes, of the poverty, suffering, corruption, injustice, the violence and killing that caused the country to fall apart – *even in the weeks when the killings were going on* (McLaren, 2007, p. 19).

The former president of the Republic of South Africa, Thabo Mbeki, started the movement for an African Renaissance because, in his opinion, the traditional values of black people have been destroyed by modernization, and Christianity did not fill that space because it was a *"Sunday religion"*. (Gevisser, 2007, p. 324). There is more truth to this observation than one would have wished.

In order to play a life-giving role in the African context, the church will have to find a meaningful way to overcome such a separation of faith and practice wherever it occurs.

A way forward

To say that all religions are paths up the same mountain is, in fact, crypto-exclusivist, because it implies that there is only one truth that you posit or

assume, even if there are different paths to that one truth. If one recognises the integrity of religious ways in themselves, it becomes clear that they may not be after the same kind of final fulfilment. *Nirvana* is the religious end of Buddhism, for Hinduism it is complete absorption into the One. (We can add: Traditional African Religion sees the continuation of life in your offspring and in the cyclical journey between the living and the ancestors, also called the living-dead: if you have children, you become an ancestor when you die. And a child that is born comes from the ancestors.) Only Christianity presents *salvation,* that can be described as *"a perfect communion of human beings with God, each other and God's creation, and this can only be reached through faith in Jesus Christ and following him as disciple"* (Bevans and Schroeder, 2009, pp. 380, 381, following S. Mark Heim).

The Christian message of salvation has been expressed in numerous religious formations. Not all would describe the message of salvation as is done in the previous paragraph. In South Africa, there is a wide range of spiritualities: there are thousands of African Initiated Churches who operate in the thought-patterns and symbolic horizon of Traditional African Religion and culture, spanning from those who are highly syncretistic to those who see the traditional religion as demonic; there are the churches that stand in the tradition of the different Western churches, and there are Pentecostal and charismatic churches. The influence of the prosperity gospel is widely felt across the spectrum.

All of these are expressed in different practices and have a different impact on every-day life.

It seems important that, in the trans-disciplinary search for domestic practices that would improve people's quality of life, African Traditional Religion and the Christian faith in particular should also be involved, in different ways and for different reasons: for people in the situation to express their views; to understand what is happening in practice from a phenomenological point of view; and from a general ethical point of view, to improve the quality of life of the people involved. The specific mission of the Christians involved can be described as an obligation to promote the flowing of life, and to try to understand and communicate, within the specific context, the meaning of the statement of Jesus in John 10:10, in a context long ago where death and life were also in grim opposition: *"I have come that they may have life, and have it to the full."*

A practical example of a life-giving practice

Globally as well as in Southern Africa the level of domestic wood use has become unsustainable. It is estimated that two to three billion people around the world still make use of traditional cooking methods that require biomass for fuel.

In the Lowveld of South Africa, adjacent to the Kruger National Park, a not-for profit company, Nova, set out in 2010 to embark with about 20 residents of Molati, a rural village in the Limpopo Province of South Africa, to design a stove that can be built and maintained with the materials, skills and finances available to these residents.

First of all, notice was taken of a large number of stoves that are produced and sold worldwide. Six stoves that were representative of the most important available models were purchased and a group of about twenty residents of Molati used and evaluated the stoves.

None of the stoves complied with the requirements of the residents. In the process of evaluating different designs the group started to think of the possibility that they can build a stove for themselves according to their own requirements, using materials that are locally available (e.g. cow dung, clay, salt, water, etc.) and skills that people normally use to build their own homes. This means that the residents *"saw"* the idea of an improved stove as a possibility for themselves and began to design ways in which this idea could work in their context.

Technical expertise from outside the community and the insight in the local context from within the community were combined to design a stove together.

Initially, five different prototypes of the locally built stove were designed and implemented in households where they were evaluated, compared, redesigned and iterated until a final prototype emerged. When most of the group had used this prototype for almost a year, this model was identified as the one to take to scale. That was the first milepost: the technical solution had been taken up into a domestic practice of at least one representative household – in this case nearly twenty!

The next phase was to find ways to take the stove to enough households in a given community to make a significant contribution to the impact of wood use on the local environment, and to generate carbon credits in order to get finance to take the stove to many communities. The process is still underway. So far, the stove

has been taken to more than 5000 households, not by selling stoves as products, but by community projects where people were assisted to build their own stoves and use them and maintain them themselves.

The whole process was driven and managed out of the local congregation.

Different elements from outside and from inside the community were combined with each other through a process where a certain type of reason and faith played a role. The result was that a certain domestic practice was designed that is being used by a number of households.

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Gijs van Oenen ~ Overspannen

democratie. Hoge verwachtingen, paradoxale gevolgen

Gijs van Oenen – Tekening
Joseph Sassoon Semah

Democratie wordt niet bedreigd door mensen die tegen democratie zijn, maar juist door degene die zeer enthousiast zijn over de democratie, aldus Gijs van Oenen. Wij lijken nooit genoeg democratie te hebben. Het succes van de democratie keert zich nu tegen zichzelf.
“Voor elk vraagstuk dat speelt wordt de democratie verder opgerekt: meer, meer democratie; meer, meer luisteren naar de burger”, aldus Van Oenen. Burgers verwachten teveel van de democratie.

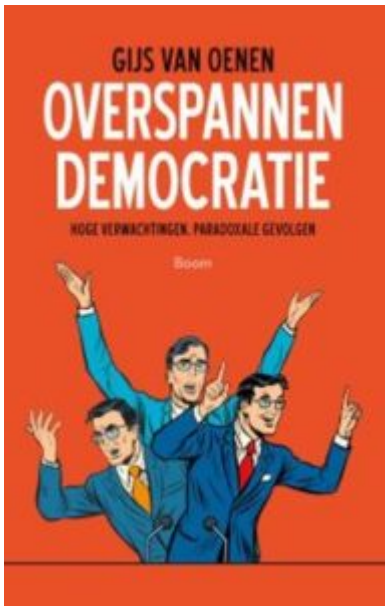
In het essayistisch geschreven boek analyseert Van Oenen het falen van de democratie, waarbij hij het neoliberalisme als een van de belangrijkste oorzaken aanwijst. De democratie heeft zich uitverkocht aan marktkrachten en burgers zijn democratische processen gaan percipiëren in termen van marktgeoriënteerd handelen en consumentisme. Maar ook de tegendemocratie (Baudet en Denk) en populistisch betoog, van zowel links als rechts, dragen bij aan het klimaat van steeds ‘meer, meer’. Ook “wantrouwen, uitdagen en ‘tarten’ vormen (…) een steeds meer geaccepteerd middel of wapen in het politieke repertoire”. De burger ervaart een gebrek aan responsiviteit. De Franse politieke denker Pierre Rosanvallon spreekt in zijn boek ‘*La contre-démocratie*’ zelfs van een politiek

tijdperk van défiance.
Hoe komt het dat dit sentiment nu zo opspeelt, om steeds ‘meer, meer’ te vragen, steeds ‘beter’, ‘beter’, ‘beter’, ‘alles uit jezelf te willen halen’?

We zijn niet opgewassen “tegen processen die een onverbiddelijke economische, technologische of financiële logica volgen” die overheersend zijn in onze democratie; dan kom je met burgerparticipatie niet ver. De openbaarheid staat zwaar onder druk van “vermarkting en financialisering, en daarnaast ook van ontwikkelingen rondom nieuwe media, tegenpublieken, globalisering en interculturalisering”, aldus Oenen. De participatie paradox heeft tot een scheve democratie geleid.

Van Oenen ziet als belangrijkste probleem van de democratie dat zij het te goed doet, de burger en de overheid te hoge verwachtingen hebben, van zichzelf en de ander. De democratie raakt overspannen. We overvragen ons. Burgers koesteren sterke interactieve verlangens, maar beginnen te lijden aan ‘democratische metaalmoeheid’. De interactieve druk van de bestaande institutionele orde, de pressie om voortdurend interactief te zijn, dragen daartoe bij. Commentatoren die juist concluderen dat de politiek en democratie aan het opleven zijn kijken slechts naar politieke partijen en naar stemgedrag bij verkiezingen.

Oenens diagnose is gebaseerd “op een bredere opvatting van politiek en democratie. Ik zie democratie als een levenswijze en een cultuur, die haar neerslag vindt in de instituties van de moderne burgerlijke samenleving”.
Voor de burger is het een te zware last om voor alles medeverantwoordelijk te zijn en nu krijgen we de rekening gepresenteerd. Er rust een ’culturele stress’ op mensen. Dat leidt tot ‘interpassiviteit’, een onvermogen om de democratische last te blijven dragen, maar ook tot protest.



Als oplossing voor deze door Van Oenen als stress gedefinieerde situatie, een overspannen democratie, reikt hij het algoritmesysteem aan dat eindeloze combinaties kan doorberekenen, algoritmen die ons peilen. De overheid moet de verwachtingen van de burger zo goed mogelijk proberen waar te nemen, responsief te worden, door te luisteren maar vooral met peilingen en algoritmische bewerkingen van grote databases. Het bestuur is in staat en bereid de interactieve inbreng van de burger zo voor eigen rekening te nemen.
Hij kiest hierbij voor een tweesporenbeleid, die van de democratie en een algoritmesysteem dat voor ons de democratie kan berekenen. De algoritme dienen als coach van de maatschappij en is de beste hoop voor consensus.
En eigenlijk kunnen we hier ons ook niet meer aan onttrekken: deze ontwikkeling is al in gang gezet en is niet meer te stuiten. De toekomst is een algoritmische democratie, een 'postinteractieve' systeem van democratie.

Van Oenen vertrouwt op het algoritme systeem, maar stelt niet de essentiële vraag of het algoritmische systeem neutraal kan zijn, zonder afwegingen die vooraf zijn gemaakt.

Kan de democratie overleven zonder maatschappelijk debat en betrokkenheid van haar burgers? En is Van Oenen niet te negatief over burgerparticipatie? Willen mensen juist niet betrokken zijn bij maatschappelijke ontwikkelingen en worden gerepresenteerd in politieke besluitvorming?

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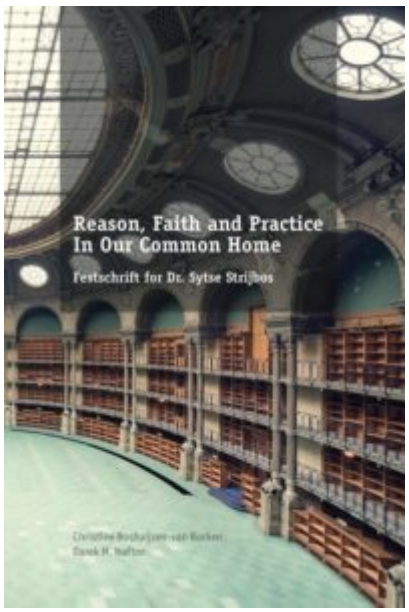
Gijs van Oenen is universitair hoofddocent filosofie aan de Erasmus Universiteit. Hij is een van de auteurs van Booms filosofiemethode *Durf te denken!*
Overspannen democratie. Hoge verwachtingen, paradoxale gevolgen.
Paperback ISBN 9789024419654 – E-book9789024419661 – Boom Uitgevers, Amsterdam, 2018

Een paar jaar geleden organiseerde *Felix Meritis*, Europees centrum voor kunst, cultuur en wetenschap en AMSU de workshop '*Active citizenship. How to make it work?* in het kader van een meerjarig programma Het huis van de burger.

What is the role of the citizen in a rapidly changing society? How should active citizenship in everyday practice work?
Zie:

Linda Bouws – St. Metropool Internationale Kunstprojecten

Three Secular Seductions: One nation, One government, One science ~ Festschrift for Dr. Sytse Strijbos



Introduction
Is *evidence-based politics* [i] an idea a monolithic view of society? In one version of such a monolithic view, it is (a) the government that directs a society within (b) the boundaries of a nation-state, giving much credit to (c) the 'oracles' of *science* in the process to take its policy decisions.
In this essay I try to clarify why *this* monolithic view of society is dangerously flawed. Part of the reasoning below will be a description of

1) pluralities that are real, but obscured within a seemingly monolithic view of a government, a nation-state and/or science.
2) a religious or pseudo-religious status that willingly or unwillingly can be assigned to (a) the role of a *government*, (b) a *nation-state* and its boundaries; and/or (c) an *evidence-based* approach of political decision-making. The focus of this essay will be on the latter (c), which usually implicates an appeal to *science*. However, from the outset it must be clear that this essay is not a plea

> for fact free politics. On the contrary, the careful, methodical or scientific, academically embedded search for relevant information is recognized as an asset. Dangerous effects of the evidence-based approach are related to the supposed status of the academic expert and its possible anti-democratic or other restrictive effects.

Although applicable within the wider context of North-Atlantic ('Western') culture, Sytse Strijbos' homeland, the Netherlands, is the assumed political context for the contentions that follow. Specifically, at the end of this essay (section 6.2) I will refer to a recent report published – in Dutch – by the Council for Public Health and Society in the Netherlands. In this report the approach of evidence-based practices in health care is criticized and at least relativized. This report is important because the government – every government – has a responsibility for public health and its funding.

Disclosive Systems Thinking, to which the name of Sytse Strijbos adheres firmly, represents an interdisciplinary and pluralistic, multi-aspectual approach to societal issues. Because of its pluralistic nature it provides several clues to dissect monolithic views. Specific philosophical sources fuelled this pluralistic look and feel of *Disclosive Systems Thinking*. These sources will be used to guide this dissection of 'one nation, one government, one science' into its constituents and to understand clashes both between these three domains and within each of them. These clashes can be multicultural tensions, parliamentary debates or deadlocks, or scientists disagreeing because of conflicting paradigms. The selection of these three seductive domains out of many more domains (money, music, drugs, …) is guided by the current popularity of *evidence-based politics* [ii] and its context: 'evidence' is expected from science; 'politics' is expected from the government; and a *national* government, to which I restrict myself here, assumes a nation state as context for its policies.

In the title 'Three secular seductions' the term 'secular' deserves clarification. I use 'secular' in the general (unreflected [iii]) sense of 'this-worldly', not 'otherworldly'. In the title, and in writing for example about 'oracles' of science, I deliberately mix religious or moral terms like 'oracles' or 'seductions' with phaenomena usually considered as belonging to *this* world, this *saeculum*: nations, governments, sciences. So to these domains or phaenomena the adjective 'secular' is attached, not necessarily to the people dealing with them. On the contrary, I don't consider religious people – here: people acknowledging some

otherworldly influence – to be more immune to the seductive effects of an undivided, impressive nation, a strong government or the supposed objectivity of science than other people who would call themselves secular. Nor do I consider secular people more immune to these seductions than people who would call themselves religious.

My point is: these immanent, this-worldly, phaenomena can have similar effects that usually are ascribed to supposedly otherworldly or transcendent phaenomena. Examples of these effects are: producing energetic zeal, putting a devotee under a spell, untying strong loyalty or absolute trust, or demanding absolute obedience or unconditional acceptance of verdicts. These effects can lead to both positive and negative behaviour. Usually these effects are associated with religious people. For people living comfortably in 'a secular age' with its generally presupposed 'immanent frame' (Charles Taylor) it is more likely that supposedly *secular* phaenomena are triggering these effects than overtly supposedly otherworldly ones. Writing about nationalism below, I appeal to the late Lancaster professor of Religious Studies, Ninian Smart, to defend such a blended treatment of religions, worldviews and some encompassing -isms.

After introducing several *types of plurality*, this essay provides a closer look at the three domains of nation-state, government and science, in order to bring to light inherent pluralities within each of them. These pluralities are easily ignored by types of nationalism or patriotism, by centralistic views of governance, and by types of scientism. The essay converges into a plea for these pluralities to be explicitly acknowledged within society and government, in order to prevent oppressive styles of politics.

A plurality of pluralities

One of Strijbos' prominent academic concerns has been to promote an *interdisciplinary* approach to theoretical reflection, especially to reflection directed towards practices in society. Not only he 'fathered' the *Centre for Philosophy, Technology and Social Systems*, but from 1996-2012 he was one of the driving forces for the annual working conferences of this CPTS. Looking back on the 9th one, Spring 2003, he wrote a discussion paper: 'Towards a new interdisciplinarity' in which he wrote: "It is the main objective of the CPTS to create a kind of interdisciplinarity which enables to address the broader societal issues in the research process and the design stage of technology".[iv]

Systems theoreticist Gerald Midgley considers as one of the 'significant strengths' of this interdisciplinary approach that it 'is inclusive of ethical debates', for example by dialogue during the design stage of new technologies. However, he fears that in real life during these dialogues ethicists will be 'captured' by 'scientists with a nascent technology, employed by a company'. Does anyone know of a technology under development, that has been abandoned 'after hearing the arguments of philosophers'? He seems to prefer another option for ethicists, that is the option, 'through alliances with other stakeholders, to make their case in various civil society fora'.[v]

A key term in interdisciplinarity is *plurality*. However, the previous two paragraphs make clear that not only a plurality of academic disciplines is relevant for the type of systems thinking Strijbos advocates. There is a plurality of practices in society, too (practices broadly taken). Among these practices 'doing science' and 'doing technology' themselves already are two, and, if you want, 'doing philosophy' another. Other societal practices are focussed on economy (business, banks, factories), politics (in formal or informal ways), art (orchestras, musea) or spiritualties (churches, mosques); on family life, education (primary schools, high schools), social life or leisure (clubs) or whatever.

Another type pf plurality is pointed to by Midgley writing on (the lack of) fora for 'ethical debate'. When and where interpretative steps or normative issues are involved, human beings often appear to approach these issues from differing perspectives, as if they arrive at the issue from differing directions. It is one thing to signal global climate change (and even that is not without interpretation debates!), it's another thing how to react to it: which and whose behaviour has to be restricted, and to what extent, if any behaviour at all? Exactly these different perspectives explain the lengthy political debates in parliament or in the press.

Yet another type of plurality is not yet mentioned. Although the CPTS working conferences were organised in the Netherlands, participants came from Sweden and South-Africa as well. These participants, being aware of their own specific societal issues, brought their own context with them. This led to debate, not of course debate about arithmetical results like that of 2 + 2, but debate about for example the acceptable level of technological complexity to be used to facilitate decision making processes: mobile phones are broadly used worldwide, but 'virtual meeting rooms' certainly not.

Summarising this ‘plurality of pluralities’: this last type of plurality can be called ‘contextual plurality’; the perspectival one ‘directional plurality’. Although Mouw and Griffioen [vi] dubbed the plurality of societal practices ‘associational plurality’, I prefer to use the term *structural plurality* in order to refer not only to the diversity of institutional constellations, associations or practices that together can be called a society, but also to the diversity disciplines that together can be called ‘science’ (taken as a formalised activity or as a body of knowledge). Both of these diversities can be explained primarily by structural features according to which reality appears to us as human beings or by the structural features according to which we human beings engage our environment. Our life conditions appear to be such that we need at least some economical behaviour and (institutionalised) economical practices, or even, so it seems, an academic discipline called economics.

One nation

In this and the next two sections I will explore which types of pluralities are relevant within the domains of the nation, the government and science. Every section I start however by supposing there are some pluralities to be found and to be defended. Given that assumption I mention a tendency that carries in itself a danger of ignoring or threatening at least one of these pluralities, putting under pressure what corresponds with this kind or these kinds of plurality in real life.

The dangerous tendency I want to explore in the domain of the nation(-state) is that of *nationalism*, identifiable by a series of features described by Ninian Smart. Nationalist movements are vigorous, not only in for example India or Sri Lanka (Hindu or Buddhist nationalism), but also in East- or West-European countries (Hungary, Scotland). In Hungary, for example, this nationalism is visible in the fences at the border by which refugees from Middle East of African countries are kept out.[vii] This nationalist and avertive attitude is not only triggered by ethnic differences, but by religious differences too, especially by anti-islam sentiments.

Smart, who uses a seven-dimensional model to describe religions in his introduction to *The World’s Religions*,[viii] adds the question: does this model also apply to ‘systems … commonly called secular: ideologies or worldviews such as scientific humanism, Marxism, Existentialism, nationalism, and so on’? [ix] As the first of three examples he selects nationalism. He describes its *rituals* of nationhood (e.g. the singing the national anthem), its powerful *emotional side* (the sentiments of patriotism), its *narrative* of the national history, its *doctrines and*

principles (e.g. of self-determination and freedom), its *ethical* values (e.g. loyalty and a law-abiding attitude), its emphasis on the *social* and *institutional* aspects of the nation-state (e.g. the head of state), and finally the *material* embodiment of national pride (e.g. in great buildings and memorials). Marxism is described by Smart with a shorter but similar seven-dimensional list. More caution Smart shows mentioning features of scientific humanism, because it does not 'embody itself in a rich way as a religious-type system'. His conclusion is nuanced:

Though to a greater or lesser extent our seven-dimensional model may apply to secular worldviews, it is not really appropriate to call them religions, or even "quasi-religions" (…). However, (…) the various systems of ideas and practices, whether religious or not, are competitors and mutual blenders, and thus can be said to play in the same league.[x]

For Smart it doesn't matter whether someone has reasons to *categorize* a worldview or some -ism, for example nationalism, as secular or religious. His point is: a worldview or -ism can have observable features similar to that of religions: they 'play in the same league'.

Now, back to nationalism itself, and the question: (how) does it put one or more types of plurality under pressure? For types of nationalism, either some nation as a (supposed) ethno-cultural entity or some nation-state as a political entity is the focus. Its unity is an essential feature of this entity – by definition, one can say. But in a more pregnant sense, emotionally, this unity has a seductive force for nationalists of most, if not all types. On the descriptive level this unity does not so much refer to geographical contours of some nation or a nation-state (the British empire consisted and still consists of several not well connected areas). However, the entity is and *has* to be distinguished from other nations or nation-states. It is *this* nation or nation-state that deserves a special role in world history. For this special role, all internal capacities and forces have to be united. So this unity of the nation(-state) is not only descriptive, but prescriptive as well: it contains a normative ideal, or better: an anti-normative ideal. This ideal, this unity has to be defended *at all costs* against possible intruders. Mind the absolutism here that easily gets religious overtones.

When we observe this stress on national unity, then: which types of plurality are in involved within the domain of the nation(-state)? And which types are possibly in danger? The structural plurality of diverse societal institutions or associations

(postponing the diversity of disciplines within science to section 5)? The directional plurality of diverse worldviews or religions? And/or the contextual diversity, especially within the nation or nation-state?

All three of them are involved, and all of them appear to be put under pressure too – albeit in different ways, as the following examples illustrate. Let's start with the *structural* (associational) plurality. Already in the Roman Empire – admittedly bigger than what is usually considered to be *one nation*! – *collegia*, brotherhoods related to some guild, mystery religions, or whatever) were raising suspicion as soon as they had some membership code that pointed to secret, members-only activities. Nowadays Russia provides an example of pressure on the freedom of media, (international) NGOs and even large companies. Putin's party is called *United Russia* and in 2016 with more than 50% (!) by far (!) the biggest party of the country. The Russian Orthodox Church, like a lot of eastern orthodox churches, has strong nationalist inclinations, and is allowed to continue its public presence. Other Christian 'flavours' (Baptists, Pentecostal) however are having difficulties in getting along, not to mention Islamic groups. Greenpeace or Baptists are dubbed as 'foreign' influences. So not a secular anti-religious sentiment is threatening a *directional* plurality here, but nationalist feelings are threatening all kinds of 'deviant' societal associations.

For awareness of directional plurality, in the North-Atlantic cultural sphere immigration politics and 'islamophobia' is enough, too. However, not only nationalist movements (mixed with *Pegida*-like anti-islam sentiments) are putting this plurality under pressure. In the Netherlands part of the official integration program for immigrants consists of the presentation of 'our' country in a movie. Debate arose about the inclusion in this movie of topless women at the beach and of the legal marriage of a homosexual couple. A one-sided emphasis on 'our', modern or Western values, easily blots out the presence of allochthone critics sharing a modern worldview without supporting a libertine ethics, or of Dutch homosexual citizens that for religious reasons choose for celibacy and for communities or congregations that supports them in this choice. A supposedly majority worldview or religion endangers the (public) continuation of minority worldviews or religions.

What about the *contextual* plurality? Here the effects of nationalism depend on the scale of observation. Because the national context is sharper delimited from other nations or nation-states, on an international scale the contextual plurality is

enhanced. But *within* the nation(-state) conformity can smooth out regional, tribal or other differences when defined as deviances (local folklore, ethnic traditions, etc.). A primary example is Nazi-Germany where the slogan sounded: 'Ein Volk, Ein Reich, Ein Führer' (one people, one empire, one leader). This type of nationalism chose (not only homosexuals and gipsies, but especially) Jews as scapegoat, erasing much of their presence in Europe. Jewish quarters in towns have lost much if not all of their Jewishness. More complicated is the Brexit-case. In reaction to 'Brussels', the *United Kingdom* as a nation-state was led into a Brexit by anti-European nationalism (among other factors). Immediately, Scottish nationalism pointed to the different voting results in their 'nation' (as was the case in London, too, to be honest). Internal contextual differences within a nation-state are not easily wiped out, as African and Middle-East countries like Sudan and Syria show, too.

Structural (associational), directional and contextual pluralities are all relevant, can be concluded. And, whatever the nuances, whoever is stressing the unity of a nation or nation-state, will be aware of or reminded about the existence of these pluralities, because their participants easily will fear some pressure of homogeneity.

One government

Having the types of plurality and section structure clear, the sections on government and science can be shorter. Although the unity of the government is closely related to that of a nation-state, the attention in this section will be focussed on the pluralities *within* a government. Although decentralising (or privatising) and centralising tendencies can occur simultaneously, I focus on the centralising tendencies. Often, a centralising tendency is related to the call for a strong leader – and someone creating or 'listening' to such a call…

Among the dimensions of nationalism, mentioned by Smart, the sixth one refers to the emphasis on national social institutions, for example the head of state. Of course, a government is more than a head of state. You can think of institutions like the cabinet council, government departments, parliament and senate, local governments with mayors and city councils, or, by taking the government of a country in a broad sense: political parties, public services, the police, national security service, courts and other organisations to prepare or administer laws, or to enforce 'law and order'.

With this list, the awareness of the role of *structural* plurality *within* the government is laid bare. For this structural plurality here, 'institutional plurality' is a more specific term. Is this plurality put under pressure by stressing the unity of the government? And what about the other types of plurality? Starting with the former question, indeed the pressure put on the different institutions cannot be ignored. The framing of 'the strong leader' more often than not is followed by a degradation of the role of their party or the parliament into a mere applause machine. Power is seductive. Dictators like to give the impression of rule of law, but democratic institutions or even courts are functioning as empty shells. By reordering departments a new government (a new coalition) can show its priories. In the Netherlands a department of 'Agriculture, Forestry and Fisheries' in 2010 has been combined with Economical Affairs and Innovation. So yes, institutional diversity, advocated already by Montesquieu to balance power, are not immune to the strong government.

The role of a parliament immediately makes clear the importance of *directional* plurality in a government. In a serious parliament exactly the diverse value systems of different parties, of different worldviews or even religions are providing the reason for political debate. So any tendency stressing the unity of the government at the cost of *real*, in depth political debate is an attack on directional plurality: it diminishes the (formal [xi]) possibilities of directional plurality that exists within society to become public and politically visible.

Finally, what about *contextual* plurality within the government? A typical example of the importance of contextual awareness is the decision at what government level laws have to be formulated. In some parts of the Netherlands, the so-called Bible Belt, Sunday opening hours for shops are a sensitive issue because of a majority (or at least a significant percentage) of citizens affiliated to a pietistic strand of Christianity that insist on a public Sunday rest. On the national level debates entered parliament about the stress of 24/7-consumerism, the freedom of individual consumers, and the coercive effects on shop-owners to open their shops on Sundays against their convictions or beyond their financial (employee payment) possibilities. These arguments were raised by both religious and secular parties (so religious diversity is not the only factor in this debate). In the end the decision and policymaking about opening hours of shops was referred to the local level. On the one hand this decentralisation of the decision seems to do justice to the contextual diversity within the country. On the other hand this awareness

does not prevent coercive effects between neighbouring municipalities. A neoliberal free market emphasis, dominant in the central government, is influencing local contextual circumstances.

Our conclusion is that *within* the government of a country (government levels included) structural (institutional), directional and contextual pluralities are relevant, All three of them are under pressure when the central government, a head of state or some other of the governmental institutions becomes a position dominating the – then lost – balance of powers.

One science

Science can be considered as a worldwide methodical activity or project by humanity, aiming at the clarification of domains or aspects of our existence. The resulting, growing body of knowledge of this project can be called science, too. History of science makes clear that in a process of diversification more and more disciplines and sub-disciplines have appeared on stage, which on its turn gave rise to different types of interdisciplinarity.[xii] These types differ, among other aspects in degree of cohesion or boundary crossing that results from the cooperation between scientists from the different disciplines involved. 'Encyclopaedic interdisciplinarity' is just the availability of different disciplines next to each other (without any boundary crossing), 'integrated interdisciplinary' allows concepts and insights from one discipline to contribute to the problem-solving or theory-development of others.

When on this scale some ideal of 'unified science'[xiii] is taken as summit of interdisciplinarity, in the work of Strijbos this unity is *not* taken as an ideal. His plea for interdisciplinarity is called interdisciplinarity precisely because of his conviction that irreducible pluralities exist and are to be acknowledged within the worldwide project of science or its resulting body of knowledge. So again, let's ask whether the different types of plurality are relevant here, too, and whether an ideal of 'unified science' is endangering the acknowledgment of these pluralities.

As a process leading to a *structural* plurality the diversification of disciplines has been mentioned already. An important point here, however, is obscured by talking about diversification. It is true that 'philosophy' has been a container word, encompassing for example 'natural philosophy' for the branches that we now call 'natural sciences'.[xiv] This unity of ancestry suggests that a 'unified science' in the end is an interesting goal. However, exactly this origin and seduction does

conceal the irreducibility of the diverse disciplines to each other – an anti-reductionist stance that is implied by the concept of 'structural plurality' here. For example, (socially) intelligent behaviour should not be reduced to (the result of) the interaction of subatomic particles. Physics is *not* the discipline to study psychological, social or political affairs. Types of reductionism are a permanent pressure on all sciences, apart from probably the exemplary ones: mathematics and physics.

Going over to *directional* plurality within science often a first reaction is that worldview or religion should have no influence on science. If it would not have been an example of is/ought-reasoning, someone could easily add: worldview or religion has no influence whatsoever on mathematics (2+2=4) or physics (a quark behaves as a quark). True enough. However, in real life the development of science takes place in a cultural and political environment in which worldview and religion does play a role. And that is not only a matter of external context, it is part of the mind-set of the scientists themselves, not to mention the managers of universities. Choices about research direction are made by groups of people with their specific interests, problem priorities, value systems and other personal or institutional resources. The claim that science is able to have an autonomous development, ruled by scientific reasoning only, will be difficult to substantiate. The reality is: there are scientists adhering worldviews or religions that fuel a value system in which science *should* serve urgent societal problems.[xv] Should the work of these last type scientists be excluded from the worldwide project of humanity called 'science'?

The reality is, too, that not only the choices of research direction, but also the subsequent work is laden with personal views and convictions: what about the interpretative and normative questions that especially in the humanities are part and parcel of the work? Either you are a behaviourist, or not. Are human beings 'nothing but' an emergent phaenomenon 'ultimately' based on matter and energy, or is there some ontological irreducibility that explains the epistemic irreducibility mentioned before? So here: directional plurality will be visible in the real life development of sciences. Some ideal of 'unified science' can lead to nervousness about the existence of parallel paradigms in research development or to devaluate research directions that do not sit easily with one's convictions (whether reductionist or not, for example).

Turning to *contextual* plurality, the context in which scientists live and work and

make their decisions is mentioned just before. Nobody can deny the different circumstances in which scientists worldwide are doing their work. This *does* influence the development of their research. In Cameroon, scientists can have an interest in the Benoué valley in the North.[xvi] I guess that it will be difficult in most African countries to develop frontier knowledge in the field of nanotechnology or nuclear physics. In dealing with scientific contributions from all over the world, scientists usually will be aware of these kinds of contextual differences. However, here I don't see compelling reasons to think that some ideal of 'unified science' would be disturbed by the contextual differences within our global village. Academic standards usually are guarded by international journals and accreditation organisations.

Within science, we can conclude, all three types of plurality again are relevant. However, under pressure by some ideal of 'unified science' are only two of these three types: the acknowledgment of structural plurality of irreducible disciplines, and the acknowledgment of directional plurality because of worldviewish and religious influences. The contextual plurality itself will be too unavoidable not to be acknowledged (see the just mentioned Cameroon example). Potential pressure on the *structural* plurality of sciences becomes clear when observing non-natural sciences (e.g. sociology, cultural anthropology) having to defend their methodologically 'weaker' approaches in comparison to the 'exact' sciences. Potential pressure on the *directional* plurality of sciences becomes clear when observing that for example within the economic sciences some paradigms or schools (e.g. the Chicago school of economics) can gain (and have gained) prominence at the cost of other approaches.

What do we gain, acknowledging this plurality of pluralities?
6.1 In a pluralistic world

In what ways can citizens, politicians or scientists profit from the foregoing discussion of types of plurality? By distinguishing types of plurality and by giving a range of quite diverse examples, I have shown the relevance of these pluralities within nation-states, governments and sciences. Ignoring them will lead to social unrest or more serious disharmony among groups of citizens, among sensitive politicians or among groups of scientists. So, paradoxically, the acknowledgement by politicians or scientists of both a plurality of pluralities and of the existence of those pluralities in the reality of real life and real science, will promote a kind of unity among people that can be called harmony, a multicultural harmony, if you

want. By acknowledging the pluralistic complexities of the real world, politicians and scientist do more justice to people in their real circumstances.

Talking about a plurality of pluralities is not just word play. In political terms, it is a matter of justice, in the end: a matter of doing justice to human beings in their diverse associations (e.g. schools), with their diverse beliefs and values, in their diverse contexts. The complexity of reality asks for complex social or epistemological philosophies, refined enough to do *justice* to complexities of real life or real science. *Disclosive Systems Thinking* is a type of systems thinking that has been informed by traditions of complex philosophy, among which the 'Amsterdam School' founded by Herman Dooyeweerd (1894-1977) has been a prominent source.[xvii] Only a real understanding of complex reality can lead to mutual understanding of human beings and to relevant development of their practices.

In the assessment of evidence-based politics

This essay started with the question: Is *evidence-based politics* an idea a monolithic view of society? In the first place, by exploring different types of plurality *any* monolithic view of society itself is made object of debate. Whether or not society is considered to be an association of associations, it is not *one* social body or *one* political pyramid at the top of which *one* government can act as a Pharaoh considering all that is below him to be his possession. Maybe, within a society some worldview or religion is a dominating, a worldview or religion considered by a majority of the citizens to be a trustworthy and reasonable guide for a serious or even meaningful way of life. But nobody should force any of these citizens to forget his or her own worldview or religion when interpretative or normative views are involved in politics or scientific work. Maybe, contextual differences in regions, tribes or social strata of a (global) society are not that big that people don't understand each other anymore. Even then, people should be aware of the contextual differences that do play a role in the (scientific) ideas and ways of life that they develop.

Secondly, an *evidence-based* approach of *politics* is inclined to ignore the different types of plurality that have been presented. There are *structural* differences between sciences, some being more quantitative, others being more qualitative – just to mention one important difference. Is an *evidence-based* approach in practical reality not having a bias towards those sciences in which quantitative or specifically statistical methods play an important role?

Furthermore, isn't evidence-based politics inclined to legitimize policy proposals with an appeal to (some) sciences, ignoring *directional* differences and debates that nevertheless are important in real life? Examples here are (Dutch) debates about vaccination (e.g. against polio). Several groups in society opposed vaccination at all (e.g. anthroposophical groups, strict Calvinist groups). Statistics about the positive results of vaccination do not take into account the real convictions behind this opposition. Debates in parliament can make these differences explicit. Finally, evidence based politics fails to do justice to *contextual* differences. Political priorities are not only a matter of numbers, but are related to societal situations and the personal convictions and circumstances of groups within this society. A debate about ritual slaughter of animals is no only a matter of pain indicators, but a matter of religious or freedom as well.

This critique of the reductionist effects of an *evidence-based* approach to politics echoes the critique voiced in report about 'Evidence-Based Practice' (EBP) in health care, published June 2017 in the Netherlands by the Council for Public Health and Society. Although the authors acknowledge the value of systematic reflection on the consequences and results of medical interventions, they signal the limits of this EBP-approach, too. In their main criticism the authors refer to the role of the context and the context-related issue what good care is within this specific context. This is easily ignored by an EBP-approach: 'What exactly is the good to be done – that can differ for every single client and his or her situation. Furthermore, changes occur in what is considered to be good care.'[xviii] In these two remarks we see a defence to acknowledge both contextual and directional pluralities. A second criticism is directed towards the risk of an EBP-approach to argue mainly on the basis of quantitative (statistical) experiments. This criticism is a defence of the structural plurality that a diversity types of academic or practical reasoning can be relevant in the specific health care situations. Omitted here is a third criticism which targets the authoritative status of quality standards formulated using an EBP-approach: this easily leads to unwarranted standardization.

Governments are – at least indirectly – responsible for the nation-wide public health care, its quality standards and its funding. Given the fact that the EBP-approach can be criticized along lines as mentioned here, governments themselves should be careful in their appeal to evidence-based policies in the domain of health care. More generally, governments should be aware that

evidence-based policy making is evoking similar criticism as worded about the EBP-approach within health care. Politics is related to specific contexts (the nation as a whole, and/or their differing local areas), to debate about different values hierarchies (of liberals, social-democrats, conservatives, Christians, humanists, etc.), and to structurally different styles of theoretical and practical reasoning and other types of communicative exchange.In conclusion: in this essay three secular seductions have been explored: the seductions to be one strong-and-special nation (with a special 'calling' in world history…), to have one strong government, and to strife for one all-encompassing science. At least three different types of plurality are presented to make clear that things probably are *a Bit More Complicated Than That*. *Disclosive Systems Thinking* can be interpreted as an approach to social studies that tries to do justice to this complexity of the real world that politicians, citizens and scientists all live in.

Notes

[i] See e.g. http://www.lse.ac.uk/government/research/resgroups/CPPAR/Documents/Evidence-based-politics-Government-and-the-production-of-policy-research.pdf. Accessed 13-10-2017.

[ii] In the section 'Evidence-Based Policy' of his book *I Think You'll Find It's a Bit More Complicated Than That* (London: Fourth Estate, 2014), 169-218, psychiatrist and science writer Ben Goldacre gives a dozen (often funny) examples of insufficient or misguiding use of evidence, by politicians too. I myself have no statistical evidence whether 'evidence-based politics' is a hype that has reached its peak already or will reach that peak soon, or that this approach will be a more permanent legitimation style in politics. I assume the latter.

[iii] The relation between 'this' and the 'other' world is more complicated than these terms suggest, even to the point that the terms themselves are misleading. See works by theologians who emphasize the 'immanence' of God, e.g. John Milbank (2006).

[iv] Sytse Strijbos, 'Towards a New Interdisciplinarity', in Rob A. Nijhoff, Jan van der Stoep, Sytse Strijbos (eds.) *Towards a New Interdisciplinarity. Proceedings of the 9th Annual Working Conference of CPTS* (Maarssen: CPTS, 2003), 133-138; here: 137.

[v] Gerald Midgley, 'Reflections on the CPTS Model of Interdisciplinarity', in: Sytse Strijbos, Andrew Basden (eds.), *In Search of an Integrative Vision for Technology. Interdisciplinary Studies in Information Systems* (New York NY:

Springer 2006), 259-268; here: 267.
[vi] I am following here the analysis in Mouw, Richard, and Griffioen, Sander. *Pluralisms and Horizons: An Essay in Christian Public Philosophy* (Grand Rapids: Eerdmans, 1993), summarised: on pp.168-173. Mouw and Griffioen share with Strijbos awareness of the philosophical legacy of the Dutch philosopher Herman Dooyeweerd (see note 11).
[vii] Migrant crisis: Hungary declares emergency at Serbia border. BBC News. 15 September 2015; see http://www.bbc.com/news/world-europe-34252812 (accessed June2, 2017).
[viii] Ninian Smart, *The World's Religions. Second Edition* (Cambridge: CUP, ^{2}1998), 13-22. The seven dimensions are italicised in the description of nationalism (immediately following).
[ix] Ninian Smart, *The World's Religions,* 22. The example of nationalism follows immediately (22-25).
[x] Smart, *The World's Religions*, 26.
[xi] This critique is touching the work of Jürgen Habermas as well. Although Habermas certainly opposes any oppressive government and (especially since 2001) explicitly invites religious traditions to join in in public debate. He is too afraid for religious views to allow them to be voiced by people having formal political function during their professional activities – even members of parliament! See the recurrent debates of this restriction in Craig Calhoun et al. (eds.), *Habermas and Religion* (Cambridge: Polity Press, 2013).
[xii] Sytse Strijbos, Andrew Basden, 'Introduction: In Search for an Integrative Vision for Technology', in: Sytse Strijbos, Andrew Basden (eds.), *In Search of an Integrative Vision for Technology. Interdisciplinary Studies in Information Systems* (New York: Springer, 2006), 1-16; here: 1-2, with reference to M.A. Boden 'What is interdisciplinarity?', in: R. Cunningham (ed.) *Interdisciplinarity and the Organisation of Knowledge in Europe* (Luxembourg: Office for Official Publications of the European Communities, 1999), 13-24.
[xiii] Otto Neurath (1882-1945) is one of the names related to such an ideal. For an overview of at least 15 types of scientism: see Rik Peels, 'A Conceptual Map of Scientism', in: Jeroen de Ridder, Rik Peels, and René van Woudenberg (eds.), *Scientism: Prospects and Problems* (New York: Oxford University Press, forthcoming). Peels categorizes the type of scientism that Neurath advocates as one of the 'eliminative' types of scientism, within the spectrum of 'academic' types of scientism that Peels distinguishes.

[xiv] Cf. the title of Isaac Newton, *Philosophiae Naturalis Principia Mathematica* (London: Royal Society, 1687).
[xv] See e.g. Nathan D. Shannon, *Shalom and the Ethics of Belief. Nicholas Wolterstorff's Theory of Situated Rationality* (Eugene OR: Pickwick Publications, 2015).
[xvi] This is a real life example: this year, Gustave Gaye defended a PhD-thesis on this region (2016) at the Cameroon *Institut Universitaire de Développement International* (see http://www.iudi.org).
[xvii] See Jonathan Chaplin, *Herman Dooyeweerd. Christian Philosopher of State and Civil Society* (Notre Dame IN: UNDP, 2011). Chaplin's writing style is more precise and readable than Dooyeweerd's.
[xviii] 'Wat het goede is om te doen kan per patiënt en per situatie verschillen. Opvattingen over wat goede zorg is zijn bovendien aan verandering onderhevig.' (RVS 2017:9).

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Raad voor Volksgezondheid en Samenleving [RVS], *Zonder context geen bewijs. Over de illusie van evidence-based practice in de zorg* [*Without context no evidence. On the illusion of evidence-based practice in health care*] (Den Haag: RVS, 2017)
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Charles Taylor, *A Secular Age* (Cambridge MA: Harvard University Press, 2007)

Online resources:
https://en.wikipedia.org/wiki/Types_of_nationalism
https://en.wikipedia.org/wiki/United_Russia
http://www.iudi.org
http://plato.stanford.edu/entries/nationalism
http://plato.stanford.edu/entries/patriotism
http://www.bbc.com/news/world-europe-34252812
http://www.lse.ac.uk/government/research/resgroups/CPPAR/Documents/Evidence-based-politics-Government-and-the-production-of-policy-research.pdf
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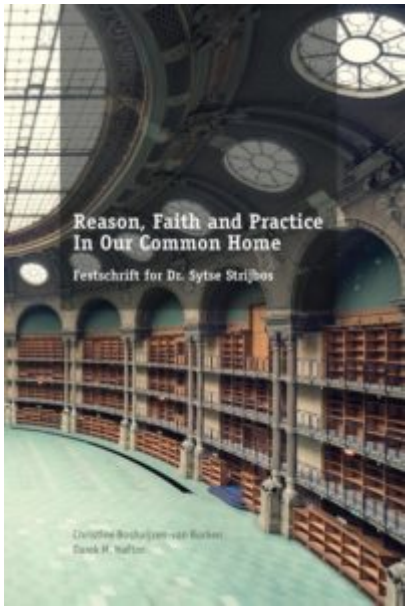
Celebration of Sytse Strijbos' Academic Achievements ~

Festschrift for Dr. Sytse Strijbos



This remark is in honour of Professor Emeritus Sytse Strijbos. His work for the Centre for Philosophy, Technology and Social Systems (CPTS), which later evolved into the International Institute for Development and Ethics (IIDE) has been highly important for me as a PhD student, and later, for my professional career and guidance of own PhD students. The common denomination in our work relates to our interest in Systems Thinking and Herman Dooyeweerd's philosophy.

We met the first time more than 20 years ago, at the Free University of Amsterdam where Sytse had organized a one-day seminar. This was the beginning to our annual conferences, which included researchers and PhD students from Sweden, The Netherlands, UK, and later, South Africa. The conferences were held at Sytse's home town in Maarssden, at an old house which used to be a convent. We conveniently stayed in the same building as where the conferences were held and the nuns, who now had moved to a newer convent, provided full time lodging for us. The surroundings of this venue were beautiful and inspirational for many interesting conversations.

In preparation for each conference, the participants shared their draft papers before hand so that others could reflect on the content and prepare comments and questions. The presentations were given lengthy time to allow for comprehensive reviews. After each presentation, when Sytse's lead the discussion, he divided into: first, *Questions/Comments for clarification*; second, *Questions/Comments for critique.* This division was very helpful for me as a student. If it was a question for clarification, I needed to be more clear in my explanation; if it was a question for critique, I needed to reflect on my standpoint and provide better arguments (or abandon). What was also very helpful, a few days after each presentation and discussion, each presenter had to reflect on what was brought about and give feedback on what they intended to act on. In that way, the others got recognition of what had been influential for further

development of the work and how they might have contributed to this.

In addition to the conference presentations there was also invited guests who gave presentations and lectures on topical issues of our interest. By meeting such distinguished guests in this relaxed conference setting, we got very good contact and had many informal discussions which I have brought with me in my professional career.

The conferences resulted in proceedings for which we took turns on being the editors. By that and by interacting with more seniors, I also learnt about the craft of being an editor (and got an additional merit on my CV). The proceedings included our updated versions of the conference papers, complemented with comments from the editors, and, therefore, became of high quality. At first, these proceedings were only distributed by print but, eventually, also electronically.

Besides annual conferences, a second collaboration was the book "*In Search of an Integrative Vision of Technology*", which was published 2006, ten years after our first meeting in Amsterdam. Sytse was one of the editors and main authors and several of us CPTS members contributed with chapters based on our own research focus with relevance to our 10 years of collaboration.

Finally, the inclusion of scholars from South African universities, on Sytse's initiative, has meant life long relationships with some of them as well as made me and other conference delegates from our part of the world aware of the different context in which we operate and the different problems that we face. For instance, water management means one thing in The Netherlands where you need to protect against flooding, while something totally different in South Africa where there is a scarcity of water. This inclusion also made us more responsive to ethical issues, worldwide.

Additional activities, which I also wish to highlight:
– Sytse's PhD course in Luleå, in 1996, that focused on the philosophy of technology. To me, that course was an eye opener in deterministic perspectives of how we think about technology.
– Sytse, being part of my PhD exam committee, in 1998, for my thesis "*A Multi-Modal Systems Extension to Soft Systems Methodology*".
– Sytse, occasionally being guest lecturer at my current affiliation at Linnaeus University, both for master students and PhD students.

Now, the nuns have stopped organizing our conferences and the Maarssden house is sold. We are grateful to having learnt to know many scholars throughout the years and the relationships that have evolved. Although the conferences are not in place any longer, the collaboration continues with people we have learnt to know during these 20 years, and also with Sytse.

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For more, and additional information about CPTS, see http://www.basden.salford.ac.uk/cpts/story.html