

Complexity, postmodernism and the bioethical dilemma

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This article examines the implications of a postmodern ethics for bioethical problems. Traditional approaches to bioethics, with specific reference to “principlism”, depend on a modernist strategy which attempts to produce generalised solutions. Making use of complexity theory, it is shown that the factors specific to each instance cannot be reduced in an objective way. The contingency of each individual case has to be considered. This leads to an ethics which cannot be the result of following universal rules, but one that has to accept the responsibility for the outcome of our decisions, even if these outcomes are not fully predictable. The responsibility for our choices cannot be shifted onto some *a priori* principle.

Kompleksiteit, postmodernisme en die bio-etiese dilemma

Hierdie artikel ondersoek die implikasies van 'n post-moderne etiek ten opsigte van bio-etiese probleme. Tradisionele bio-etiese benaderings, met spesifieke verwysing na beginselmatigheid (*principlism*), maak staat op modernistiese strategië wat veralgemeende oplossings na vore bring. Deur kompleksiteitsteorie aan te wend, word aangetoon dat die faktore wat spesifiek is aan elke situasie, nie in 'n objektiewe manier gereduseer kan word nie. Die gebeurlikheid van elke individuele geval moet oorweeg word. Dit lei tot 'n etiek wat nie tot stand kom deurdat universele reëls nagekom word nie, maar wat bereid is om verantwoordelikheid te aanvaar vir die besluite wat geneem word, selfs al is die uitkomst van die besluite nie ten volle voorspelbaar nie. Die verantwoordelikheid van besluite kan dus nie verskuif word na 'n *a priori* beginsel nie.

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The world in which we live and act is becoming more and more “postmodern”. The media are ubiquitous and our understanding of others and ourselves is determined by images and pieces of information which are virtual products. Traditional modernist assumptions — that there is a rational solution to all problems and that we should strive to extract exact truths in most contexts — are certainly becoming more difficult to maintain. In this paper we want to critically evaluate demands made upon morality by acknowledging that we live in a “postmodern society”. We wish to examine the impact of “postmodern ethics” on morality in general, but on applied bioethics in particular. To provide a cohesive description of postmodern ethics is in many ways an impossible task. In the field of biomedical ethics is even more problematic since a postmodern approach will raise questions about the nature, justification and practice of bioethics.

Notwithstanding a widespread challenge to the “project of modernity”, contemporary bioethics seems to be resigned to an apparently modernistic theoretical framework.¹ A myriad of modalities is supposed to assist the medical practitioner’s quest for ethically sound action: so-called “ethical rules”, bioethical “specialists”, committees and other bodies, and divergent ideas and theories of biomedical ethics, ranging from utilitarianism (the archetype of consequentialist theories) to one based on principles (the archetype of deontological theories).² Both of these extremes are modernistic in the sense of prescribed rules that would guarantee morality. A specific example is the version of principlism³ promoted by Beauchamp & Childress

1 Alistair MacIntyre, in *After Virtue* (1981), denied that modernity should ever have been. The searing attacks of Friedrich Nietzsche are early examples of extreme distrust dating back to the latter part of the nineteenth century.

2 We do not imply that all practitioners show an understanding of this; it is the essence of our challenge that modernity prevents the realisation and acceptance of ethical responsibility in biomedical ethics as in other spheres of life.

3 In this context, principlism may be defined as a theory of ethics which presupposes that moral actions may be reduced to compliance to particular principles (or rules). In bioethics its origins may be traced to the Belmont Report (of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, April 18, 1979) <<http://ohsr.od.nih.gov/guidelines/belmont.html>>

(1994). It is by far the most prevalent, quoted and common, as well as the most taught, and “practised” contemporary “theory” of biomedical ethics. Its four principles have become the cornerstones of biomedical ethics in America, in much of the western world and in the bioethical literature. This is often presented to the medical practitioner with unquestioned authority and an equally unrealistic tenet: honouring these principles guarantees ethically sound action.

It should be clear that there is a tension between this theoretical framework and its application in a complex, postmodern world. On the one hand, there is a desire for clear ethical guidelines, but, on the other, there is the realisation that such guidelines, if they are general abstractions, do not address the contingency of specific cases. This places the bioethical practitioner in a dilemma. S/he appears to have to choose between clear guidelines (which do not really map onto reality) and a radical contingency (which provides her/him with no way of justifying her/his actions).

In what follows we wish to show that an interpretation of postmodernism, substantiated with arguments from complexity theory, can help us to deal with this dilemma. Without dismissing principlism, our view can seriously challenge the scope of principlist arguments. This interpretation will be developed by considering the characteristics of a postmodern ethics which does not imply relativism. It is exactly in this respect that complexity theory provides such a useful framework. This position will then be used to critically evaluate the principlist position. Finally, some conclusions on the implications for bioethics will be drawn.

1. Complexity, ethics and postmodern society

Contemporary society, whether “terminally modern”, “functional” (Van Peursen 1974) or indeed “postmodern” (Lyotard 1984, Bauman 1993, Cilliers 1998), exhibits certain characteristics or traits.⁴ There

4 Our use of the term “society” should be expanded upon. Society consists of many and diverse groupings. Though many of these are rather fixed and determined, the majority are contextual and potential, in Bauman’s vocabulary, “somewhat postulated”, and warrant special consideration when viewed from the perspective of postmodernity.

are many diverging characterisations of the forms of knowledge in this society, but in general there is a resistance to universal answers and a denial of a single overarching metanarrative. The main problem with the modernist insistence on a single narrative is that it underestimates the complexity and the relational nature of the issues at stake (Cilliers 1998: 112). Human culture is complex (Van Peursen 1974: 12) and complexity theory helps us to understand aspects of this complexity without recourse to modernist assumptions on the one hand, or a regression into relativity on the other (cf Cilliers 2005).

We shall employ analyses of the characteristics of complexity with reference to contemporary society and to the notion of the self (Cilliers & De Villiers 2000) in order to bridge the gap from complexity to contemporary bioethics. We shall firstly summarise the characteristics of complexity theory very briefly.⁵ We will argue that such a description renders the idea of a “single truth” impossible; that postmodern ethics evolve from an “agonistic” process involving a constantly changing interactivity amongst contingent groupings of individuals within society; and that all forms of truth (including ethical truth) in society are contextual, provisional and subject to change.

A complex system consists of a great number of dynamically interactive units or elements. The level of interaction is comparatively rich; the number of meeting-points (nodes) and the amount of information exchanged is vast. Moreover, each element influences, and is influenced by, an indeterminate number of other elements in varying proportion and importance. Single interconnective meeting points or nodes are of lesser importance; complex and context-sensitive patterns encode information and create meaning.

Most importantly the interactions are non-linear, thus the law of super-positioning does not apply. The components of a non-linear system cannot simply be added. Minor causes can have major results and *vice versa*. Complexity presupposes non-linearity, without which it would be a simple and predictable system; in this respect non-linear systems cannot be modelled in a deterministic way. Interactions

5 The characteristics of complex systems are summarised below fairly cryptically. For a more detailed discussion, cf Cilliers 1998.

have a short range; elements are in interaction mainly with their immediate neighbours, although effects (exchange of energy/information/knowledge) permeate throughout and influence an entire system, even as these effects are modulated along the way. There is little meta-control or centralised organisation. Self-organisation occurs through the high level of feedback.

Complex systems are open, without clear boundaries, and interact with their environments. Nevertheless, a system is “framed” relative to the observer within a functional boundary (Cilliers 2001). Equilibrium is not reconcilable with complexity since complexity requires constant evolution which in turn relies on a constant flow of energy. Equilibrium in this context signifies the “death” of the system.

Complex systems have a history which can be viewed as being an evolution over time. The past can be understood as being a collection of footprints spread through and taken up in the system as a frame of reference within which the present is viewed. Individual elements are not aware of the behaviour of the system as a whole. Due to the short range, richness and complexity of interactions, modelling a complex system in conventional ways (like using a set of differential equations) is not possible.

Contemporary human society exhibits many of these characteristics. It can be understood as a system with individuals and groups of individuals as the elements. There is a high level of interaction during which information is constantly exchanged between subjects. One cannot conceive of an individual as being in isolation; the isolated self has very little meaning. Each element or self is constituted in a system of differences and is moreover in itself a complex heterogeneous system. Each person finds himself fragmented into various contextual sub-elements created by the variety of his potentially conflicting contextual interests, resulting in internal uncertainty and conflict. There is a dynamic competition for the attention of each agent. This dilemma contributes to the tentativeness, provisional nature and moral uncertainty characteristic of our times.⁶

6 Roederer (2000: 76-7) sketches the background to the fragmentation of the individual and society. The growth of corporative capitalism, industrialisation,

Subjects are bombarded with information and cannot hold a comprehensive view of everything in the moral community. Since there is no central authority with undisputed legitimacy, moral certainty escapes the moral agent. Moral decisions are always provisional and subject to circumstance; new answers constantly need to be developed in constantly changing situations. What is ethical in one circumstance may not be ethical in another, since the two contexts are not reducible to each other.

This does not curtail the relevance of the moral agent. Relevance is constructed, not found, in terms of kinds of activities the agent participates in. We cannot escape the “agonistics” of the moral society or network (Cilliers 1998: 138). Only through participation in the process of society can we play any meaningful ethical role. The non-linearity of cause and effect relations applies in particular to human society. Unpredictability, self-organisation, dynamic adjustment and evolution are constitutive of society and thus also of the generation of ethical positions. Morality is understood as provisional, temporary and subject to correction. This makes postmodern ethics contentious by nature, but does not necessarily imply moral relativism, as we shall argue below.

Much of how we think about ourselves and the world is contingent on our spatial and temporal location (Cilliers & De Villiers 2000: 239), thus our personal history and professional knowledge is always pertinent. Since our understanding of ourselves and our place in the world is not static, there is also a constant evolution of our ethical position as society, personal history and professional knowledge changes, again emphasising the provisional, contingent and contextual nature of ethics.

bureaucratisation, and the increasing role of science in society fragments the individual and eventually denudes him of integrity and humanity. Factories render the human an appendage of the machine, bureaucratisation turns the official into an unthinking technocrat, and corporative capitalism finally cancels all hope the ordinary person may yet have to be the master of his own destiny. Science strips the world of spirituality and magic, whilst contemporary man is pulled and pushed hither and thither. The result is something akin to Lewis Carroll's Humpty Dumpty character. The question further raised by Roederer is whether Humpty can be restored to being a good egg (Dewey's project of reintegration) or not (Max Weber's position).

The postmodern assumption of morality as the necessary consequence of a continuous, dynamic and complex interactive participation in society, the borders of which are vague, indefinable and tentative, or contextual (“postulated” writes Bauman 1993: 46), conflicts with the possibility of ethics as the construct of a purely rational process. Ethics, and thus also applied ethics, should be an extension of the ethical process in and of society, the process whereby society is constituted.⁷ There is no abstract or universal method available which circumvents the necessity of being involved in the process itself, to partake of the “agonistics of the network”.

2. Critiques of postmodern ethics

We have now outlined the general considerations which should inform a postmodern ethics. This position will now be given some more substance, albeit it in a somewhat oblique way. From a modernist perspective, of which principlism is an example, there are a number of criticisms directed at the postmodern position. We shall take them one by one and, by reflecting on each critically, the central characteristics of a postmodern ethics will emerge.

2.1 The postmodern ethical position is fundamentally unethical

It is argued that in the absence of objective and rational considerations no ethics is possible. This challenge is based upon a misunderstanding of the fundamental position of postmodernity concerning conflicting definitions of morality (Cilliers 1998: 136-40). Postmodernity does not argue against ethics *per se*, but maintains that morality is not reconcilable with *a priori* meta-descriptions leading to objectivity and consensus. A morality based on rules, laws, prescriptions and consensus is, from the postmodern perspective, no ethics at all since it reduces the whole ethical process to calculation. A strategy

7 As displayed in civil society movements and activist organisations such as Greenpeace, clustering in pro-life and pro-choice groupings, surrounding AIDS issues, and in the euthanasia debate.

depending on consensus leads to the removal of conflicting considerations and thus to a reduction of the complexity of the situation.

Postmodernists advocate the proliferation of heterogeneous discourse and dissent as necessary in the process of opening up the complexity of the specific problem under consideration. Eventually compromise, as opposed to consensus, is required. Such a “compromise” may bracket some of the conflicting considerations for the time being, but keeps the multiple interpretations of what is at stake open. It limits the scope of the problem to the contextual here-and-now of a decision, instead of postulating the current understanding as a permanent solution. Morality is the result of an evolutionary process which should result in social transformation.

2.2 The postmodern ethical position is insensitive to the question of justice

The postmodern argument suggests that a universal notion of justice is unattainable. Under complex conditions no single judgement will do justice to the many, often contradictory, demands being made by all involved. This does not mean that justice is not an extremely serious consideration. In a sense, we can only start reflecting on the notion once we have acknowledged how difficult it is (Cilliers 2004).

The postmodern position argues that justice is not obtained by finding objective criteria which will be just, but that justice presupposes responsibility. Participants should realise the heteromorphy of language games, and that all instances of consensus on the rules of any discourse are local, legitimised by local players and therefore subject to revision (Lyotard 1984). The type of responsible evaluation required from the moral agent, we argue, should include at least the following:

- Respect for difference of values in themselves;
- Gathering as much information as possible (not all information is accessible);
- Evaluation of the consequences of a decision (not all consequences can be envisioned);
- Guaranteed revision of a decision, immediately revising its faults, both specific and general, once they become apparent.

These tenets are echoed in an ethics of responsibility as argued for by Van Niekerk (2002: 35-43) and De Roubaix (2005: 155-62), based on the work of Lyotard, Bauman and Hans Jonas, and which, argues Bauman, “is the only foundation morality can have” (Bauman 1993: 75, also 77).

2.3 Postmodern ethics is fundamentally relativistic and “anything goes”⁸

These serious and fundamental charges strike at the heart of post-modernism (Bauman 1993: 42, 14). Van Niekerk (1992: 165) reflects on the question of relativism in postmodernity, and quotes Harvey Siegel to describe “the impotence of relativism”:

‘n Relativis is nie in staat om beduidende, kritiese oordele oor die geldigheid of houdbaarheid van aansprake te vel nie. Hy is ook nie in staat om reg te laat geskied aan konsepsies van geregverdigheid of legitimititeit met betrekking tot oortuigings en kennis aansprake nie [...] Maar in die derde [...] plek, moet ons ook sê dat ‘n relativis kwalik in staat is om leiding te gee of rigting aan te dui ten opsigte van hoe ons in die wêreld behoort op te tree. ‘n Relativis beskik oor geen oortuigende gronde om reg van verkeerd en goed van kwaad te onderskei nie.⁹

Van Niekerk (1992: 168) proceeds to align postmodernism and relativism:

Die verband tussen postmodernisme en konserwatisme is duidelik: eersgenoemde is niks minder nie as ‘n flirtasie met relativisme, en daarom ‘n rooftog op die vermoë om krities te staan teenoor politieke en sosiale ongeregtigheid.¹⁰

8 This issue is discussed in detail in Cilliers 2005.

9 A relativist is not able to render significant or sustainable critical judgment regarding the validity of claims. Nor can he judge conceptions of justifiability or legitimacy with regard to convictions and truth claims. A relativist is hardly able to provide leadership or direction to indicate how we should act in life. He has no convincing grounds to discern right from wrong, good from bad.

10 The relationship between postmodernism and relativism is clear; the former is nothing less than a flirtation with relativism, and therefore a plundering of the ability to criticize political and social injustice.

The charge of relativism is consequent to the absence of overriding meta-control or universalism. There is no apparent framework to adjudicate morality, no clear normative theory of morality; in the absence of these controls, morality is necessarily relativistic. If all contemporary ethical narratives have but local range, without overarching controlling meta-narratives or integral control systems, social structure fragments into piecemeal individuality resulting in small, closed and isolated systems. This leads to relativism and the notion of “anything goes” (goes the charge). This misconception of postmodernity denies the contribution made by complexity theory. We substantiate our position against this kind of relativism in terms of two arguments.

Firstly, Jean-Francois Lyotard (1984: 15) argues that the interwovenness of social relations “creates” a network within which the individual is subjugated to the relationship which emphasises a multiplicity, but not necessarily a fragmentation. Discourse within contextual interest-clusters implies a process of constant interaction within which local narratives only make sense against the surrounding background which “legitimizes” it. Each node in the system forms part of many patterns; the self partakes of many discourses. Within the complex interactivity we find, define and redefine ourselves but not as independent individuals. There is “structure” in this ethical process — structure not subject to complete description (definitely not meta-description) — but structure that repeatedly rediscovers, reformulates and restructures itself. This structure is however not universal, eternal, fixed and rule-bound. “Control” is not external. Nevertheless, there are identifiable patterns in the system which we can say something about. Relativism and the notion of “anything goes” therefore does not describe this framework.¹¹

11 If this does not convince critics, an even stronger defence is to be found in the following position: is the process of ethics not inevitably relativistic? Secondly, as exposed above, modernity has much to answer for in terms of relativism, and should be content with defending itself. Thirdly, even if a measure of relativism is to be found in postmodernity, at least it is balanced with the underlying truth that here we have ethics which are also moral, a defence lacking in modernity.

Secondly, the striking irony is that relativism has always been integrally present in modernity, but has been partly ignored, in part negated as a temporary irritant whilst denying its structural integration with modernity (Bauman 1993: 42). Practical problematics do not allow modernity to be charged with any form of insecurity and any relativism is (argue modernists) simply a temporary and current speed hump. The eventual aim of modernity is universalism through universalisation, a futuristic pipe dream which Diderot calls posteromania. Pettit (2000: 175) confirms the connection between universalisability and relativism by claiming that “[i]f non-consequentialists are to embrace the requirement of universalizability, then they will have to adopt a surprisingly relativistic stance”.

2.4 Operationalism undermines the postmodern position

Van Peursen (1974: 12) describes three overlapping phases of human cultural development: the mythical, ontological and contemporary functional. Chronologically the onset of the ontological predates modernity but shares the characteristics of universal rule-bound morality which fixates in substantialism. To escape the latter, society becomes functional, but this in turn fixates into operationalism. Elements of the phases may be concurrent — for instance religion as mythical, law as ontological and love and human relationships as functional expression. Van Peursen’s description of ethics in the functional phase equates with deeply practical and existential life experience. Morality is understood as being something to be discovered and rediscovered. Justice is viewed as being a concrete contextual action. The threat is that the functional fixates in operationalism, that everything is defined in terms of function alone.

Can a similar charge be laid against postmodern ethics, itself a description of a function of society? The following four reasons suggest why operationalism should not be a risk. Firstly, the postmodern ethical position denies universalism or a single narrative description in terms of functionality. Secondly, the exposure of the moral agent in the agonistics of society is more than an abstract functional exchange of information; s/he exposes herself/himself. The agent is

personally involved in the ethical process, a process which is not fictional or abstract but real and actual. Thirdly, the complex interactive dynamics of the process implies that moral agency is also established in the application of the results or products of the process. And fourthly, the functionalism described by Van Peursen results from the recognition of the inability of humankind to define, describe and indeed know fundamental truths (about God for instance). This is not the purpose of the ethical function of society.

2.5 Postmodern ethical ideas are not applicable to bioethics

Arguing from a modernist position, it is suggested that practical decisions require rules. Without rules one cannot make progress when dealing with the messiness of the world. The postmodern position argues, on the contrary, that we will not be ethical if we do not take this “messiness” into account. Even the bioethical sphere does not escape this “messiness” when one considers the number of contextually-interested role-players such as decision makers, clinicians, therapists, nurses, close family and friends, and patients (grouped around “themes” like abortion, euthanasia, stem cell research for instance).

Morality is the result of a constant, reflexively-modulated interactive agonistic of the contextual grouping, with reference to applicable texts and the “footprint” of past discourse. It would nevertheless be counter-intuitive to imply that these moral decisions cannot be subject to critical meta-ethical evaluation by, for instance, academics and committees.

This reflection on the nature of postmodern ethics makes the most important difference between modern and postmodern ethics explicit: the role played by and the status of rules.

3. Are existing rules and laws inapplicable?

Postmodernists argue for the inappropriateness of “single-narrative” universal moral rules characteristic of modernity. Universality actually negates the moral prerogative (Bauman 1993: 40-1); as moral agents, we cannot sidestep our responsibility to make choices. The rules of modernity limit us as ethical beings; postmodernity liberates

us to choices without the apparent security of rules. Furthermore, using rules as a shield makes morality superfluous, resulting in “a world in which the language and appearance of morality persist even though the integral substance of morality has to a large degree been fragmented and then, in part destroyed” (MacIntyre 1981: 5). Simply following ethical rules results in a state of equilibrium which leads to moral stagnation since it creates the illusion that the ethical dilemma or question has been settled once and for all. This is a denial of the complexity of the problem.

Rules of one sort or another are of course unavoidable in the reality of life. Are existing rules and laws that impact on moral behaviour then not legitimate? They may be, conditional on a full knowledge of their limitations, provisionality and susceptibility to revision. Secondly, in their application they should be applied ethically, ie responsibly, recognising their tentative nature. They are not the formal, universalisable modernistic rules of, for example, Immanuel Kant. Blindly applied rules cannot guarantee ethical certainty. From a postmodern perspective, certainty is contextual, tentative, and open to revision. Thirdly, context determines their applicability. As in any hermeneutic dynamic, ethical decisions constantly reflect back to modify and change societal positions. Problems are not solved once decisions have been reached. Ethical knowledge is as contextual and contingent as all knowledge.

A continued debate, revisitation and evolution from historically fixed positions should characterise contemporary ethics. Conflicting narratives surrounding contextual moral societies will foster a vibrant ethical system. The abortion and euthanasia debates in South Africa illustrate these points; note how positions have evolved and softened. If moral rules do not comply with these qualifications, one is justified to question them.

How does the notion of a modernistic bioethics stand up to the demands based on the analysis as set out above? We will restrict ourselves to an evaluation of principlism because of its dominant position in contemporary bioethics. In order to do this, a description of what principlism is, will follow in order to explain why it is typical of modernistic ethics.

4. Principlism: the paradigm model of biomedical ethics

Radical medical advances in recent decades, radical societal changes, and the consequent insecurity of postmodern persons have exposed a need for ethical rules at a time when the application of those rules, ie modernity, is increasingly questioned. Zygmunt Bauman (1993: 31) describes this as the “ethical dilemma of postmodernity”. The vacuum in medico-ethical thought was filled by lawyers and philosophers.

Two facets of contemporary American culture in which the “paradigm model” surfaced, explain the characteristics and genesis of the model: the culture of “rights” and the role of litigation in American society. The rights of patients (and consequent obligations of practitioners) became the focus of a dedicated group of lawyers whose aim was financial compensation through claims of negligent fulfilment of these rights. Ethical disputes were settled in American courts, prompting Annas (1993: 3) to declare: “American law, not philosophy or medicine, is primarily responsible for the agenda, development, and current state of American bioethics”.¹² American jurisprudence thus became the moral arbiter and the foundations of principlism were laid.

Capron (1995: 1329-35) supports this analysis of the genesis of principlism. In line with the American practice, ethical dilemmas were decided in a court of law. Yet predominantly fact-based inductive reasoning based on, or justified by, case law contrasts and compliments principlism. Pluralistic societies do not always have the ability to reach consensus, sometimes necessitating an accepted procedure to settle disputes. Emphasis on protection of the individual finds application in the protection of patient rights (particularly in research). Specific values such as justice (*versus* progress), equality (*versus* degrees of equality), due process (*versus* scientific proof) and self-determination (*versus* “beneficent” paternalism and common good) quite clearly have influenced bioethics.

12 Oliver Wendell Holmes’s (1920: 172) comment on the difference between morality and the law (constitution) is apt: “[...] nothing but confusion of thought can result from assuming that the rights of man in a moral sense are equally rights in the sense of the Constitution and the law”.

According to Winkler & Coombs (1993: 343) it is the philosopher who has taken over the role of moral arbiter; “applied ethics” is more or less an extension of general ethical theory. However, the philosopher lacks practical knowledge and experience of medical practice, without which some ethical dilemmas cannot be sufficiently addressed. Based on her/his understanding of matters, the result of her/his critical and constructive reflection amount to abstract ethical rules. Respect for autonomy, non-maleficence, beneficence and justice are the four principles which crystallize in the “Paradigm model of biomedical ethics” (Winkler & Coombs 1993: 343-65). This version of principlism as advocated and propagated by Beauchamp & Childress (1994) is the cornerstone of biomedical ethical thinking and teaching.

Winkler & Coombs (1993) base their criticism on the conflicting origins and references of the principles. Each emanates from a different tradition and normative theory: autonomy from the Kantian, beneficence from classical utility and justice from contractarianism, problematising cohesion. Secondly, there is tension in the “right” of philosophers to moral verdict in a very complex applied field. Some clinicians regard the paradigm model as too theoretical and intellectual, and hold that only they can form a true picture of the problems of contemporary medicine. Thirdly, Winkler & Coombs deny the top-to-bottom applicability of principles (deny applied ethics as such). They limit the legitimate role of philosophy as one of facilitation. Abstract biomedical reflection should be based upon accepted medical wisdom, whereas it is quite common for bioethical publications to dwell almost exclusively on the abstract with disregard to context.¹³

13 Having given air to Winkler's criticisms, it seems only fair to see what he suggests as an alternative; Winkler (1993: 360) advocates contextualism: “[...] that moral problems must be resolved within concrete circumstances, in all their interpretive complexity, by appeal to relevant historical and cultural traditions, with reference to critical institutional and professional norms and virtues, and by utilizing the primary method of comparative case analysis. Applicable moral principles will derive mainly from these sources, rather than from ethical theory on the grand scale.” Winkler thus describes a bottom-up application in support of the current reanimation of casuistry.

McKinney (2000: 466-479) entertains a view of casuistry in current garb as “belonging to the paradoxical camp of postmodernism” by stating “What is

Our response to Winkler & Coombs is ambivalent. On the one hand, it seems self-evident that only experienced practitioners of medicine may be empowered to address some ethical dilemmas. Furthermore, morality is enmeshed in one's daily life, and is fundamental also to responsible medical practice. Yet, not all aspects of bioethics are based predominantly on clinical exposure. Clinical experience alone does not provide answers to all bioethical dilemmas; for example, it does not contribute much to the full and satisfactory exploration of issues such as abortion, the nature and beginning of life, genetic manipulation, cloning, stem cell research and euthanasia. Moreover, clinicians often lack the tools for moral discourse (we are nevertheless impressed with the ability of medical students to develop this skill even in a relatively short period of intensive interactive training). It would be counter-intuitive not to concede and respect the medical insights that some philosophers have developed, and their contribution to bioethics. Not all biomedical knowledge/information is that difficult to assimilate, even by non-medical graduates. Biomedical scholars can claim no *a priori* exclusive right to bioethical debate. Winkler and Coombs' criticism is therefore of limited application; there are roles both for clinician and philosopher which go beyond the application of principlism. These roles should ideally be integrated, not separated.

5. Principlism as a prime example of modernist morality

Beauchamp & Childress (1994: 37) have their own narrative about the genesis of principlism, with the philosopher's role chronologically of later and secondary nature. Their abstract and general principles develop from "general morality" ("common sense morality" [Van den Hoven 2006: 46-8]) and "accepted medical practice", which are rendered coherent through conceptual clarification and other methods (Beauchamp & Childress 1994: 3, 37, 106-9). Principles are analysed in

most attractive about casuistry today is thus its quest to balance the need for principles with the necessity to attend to the particular circumstances of a situation, exactly what Aristotle called for centuries ago".

terms of (American) case law and are *prima facie* binding, yet subject to revision and justifiable moral judgment based on the principles. Together with other aspects of the moral life (moral emotions, virtue and rights), this is presented as their moral theory (the authors do not use the term theory). Our supposition is that it is a modernist theory.

Immanuel Kant is an archetype of modernist ethics (Norman 1998: 70-91). Kantian morality is established in the good intentions of agents and is viewed as being formal, general and universalizable. A categorical imperative to act in accordance with these moral rules rests upon moral agents and the underlying motivation is reason, not emotion, context, or consequence. Morality implies being taught a collection of “precise, hard and fast, unexceptional rules not open to multiple interpretation” (Bauman 1993: 1, 18), rules that would otherwise never be discovered in an environment conducive to conformity (Bauman 1993: 26-7). The only choice is to apply the applicable rule once identified (though that is not the final word on principlism).¹⁴ The aim of principlism is coherence of our incoherent, conflicting, complex “common moral opinions”. Mariëtte van den Hoven questions the possibility of such “coherence”, and the likelihood that this account would “be more accurate in daily practice or will lead to better judgements about right and wrong” — the stated aim of principlism (Van den Hoven 2006: 48). Postmodernists would agree with this criticism; coherence is neither possible nor required.

We have reason thus to equate principlism with modernist ethics. Both rely on formal, overriding universalizable, meta-functioning rules and laws. In fact, we suggest the following objective definition of principlism: a theory of applied biomedical ethics in which predetermined normative and universalizable moral principles serve as guidelines to ethical behaviour. For these authors rules and principles are central and compulsory to bioethics because of the emphasis on action guidelines.

14 True to the postmodern position with its notions of conflict, multiplicity of stories and insecurity, Pippin (2001: 386-7) reminds us that there are other views on Kant, for instance a well-reasoned interpretation that Kant correctly read, represents an underlying value-ethic.

Furthermore principlism is impartialist due to the fact that it suggests an ethics based on impartiality, impersonality, universal principle and formal rationality (cf Allmark 1995). These characteristics of modernism are precisely the targets of postmodern criticism. Ethical debate ceases upon the introduction of principles (Bauman 1993: 29, 75, 78, Winkler & Coomb 1993: 355).¹⁵

6. An ethics of responsibility

If the postmodern view of morality is authentic and our criticism legitimate, we require a comprehensive rethink of the meaning of applied bioethics. Descriptives other than “moral” may perhaps be valid. One might even consider the possibility that the word “ethical” has different meanings. We do not deny that the principles of Beauchamp & Childress may exemplify good, but not necessarily morally good medical practice. Though postmodernity might not rescue American bioethics, other scripts might still be rewritten, or

- 15 Ironically, our criticism of principlism is supported by its authors: “Often what counts most in the moral life is not consistent adherence to principles and rules, but reliable character, moral good sense, and emotional responsiveness [...] feelings and concerns for others lead us to actions that cannot be reduced to the following of principles and rule [...] morality would be a cold and uninspiring practice without various traits of character, emotional responses, and ideals that reach beyond principles and rules” (Beauchamp & Childress 1994: 462). Therefore rights, virtue and emotions are not excluded; contextually they may be of greater importance than principles. It is only through this admission that principlism can become a framework for moral decision making. The cynic may be excused if s/he questions the validity of principles if in the end values and character are of overriding importance. The answer should be forthcoming: the chapter in which the importance of values and character is motivated, appears for the first time in the 4th edition of Beauchamp & Childress’ book *Principles of Biomedical Ethics*, and, in all probability, is an addition, following criticism such as Winkler’s and (the authors indeed admit), “recent ethical theory’s” emphasis on “neglected moral phenomena, including character and virtue” (Beauchamp & Childress 1994: 62). One can reason that the theory attains legitimacy through the possibility of evolutionary development, even though the central theme remains the principles, which therefore maintain overarching meta-status but are rendered ethical through the addition of virtue and character.

re-choreographed.¹⁶ The fundamental challenge is to render bioethics truly moral. The important message of postmodernity for bioethics is to point to an ethics of responsibility, an approach that goes beyond the strict divisions of deontology and utilitarianism, whose polarised moral approaches have inherent difficulties that make their exclusive application problematic. Deontology does not recognise the complexity of real moral dilemmas. Hiding behind rigid rules can subjugate the requirement for responsible moral action. A problem that both of these approaches share is impartialism (Allmark 1995: 19).

An ethics of responsibility ruthlessly underwrites “situationally based responses” (Allmark 1995: 20),¹⁷ and demands justification

- 16 Herwitz (1999) reminds us that we (implying South Africa) are only now in the process of being exposed to postmodernism in its trek from the north, that we can hardly entertain talk of “deconstruction” since we have not “constructed” (properly) yet, and cannot prognosticate on postmodernism and its effect on South African society at this early stage; yet he adds the very realistic comment that whatever we tend to make of our new society, we shall not be able to escape the consequences of postmodernist thinking.
- 17 Bauman’s view on morality derives and develops many of his central ideas from the work of the Lithuanian born French philosopher Emmanuel Lévinas, especially as far as the “awakening to moral responsibility” is concerned. The intimacy of this initial awakening has to be extended to the moral plurality of society, through “comprehensive thematization and systematic objectification, (though this holds the danger of) reducing all otherness (yet it has a) subordinate truth [...] with regard to the economic and political conditions of universal justice towards all individuals whom I cannot encounter personally. With and through the other I meet all humans. Herein lies the origin of equality and human rights”. (Audi 1999: 498). Bauman’s position on the nature of moral responsibility can be summed in the following excerpt (Bauman 1993: 73-74): “The other is a face in as far as I lead the way, spearhead her command, anticipate it and provoke; as I command her to command me. The Other is an authority since I am willing to listen to the command before the command has been spoken, and to follow the command before I know what it commands me to do.” “... the other is weak, and it is precisely that weakness that makes my positioning her as the Face a moral act: I am fully and truly for the other, since it is I who give her the right to command, make the weak strong, make the silence speak, make the non-being into being through offering it the right to command me. ‘I am for the other’ means I give myself to the other as hostage. I take responsibility for the Other. But I take that responsibility not in the way one signs a contract and takes upon himself the obligations that the contract

and responsibility for our moral actions. It recognises the import of contextual social, political and cultural factors in moral deliberation. We are guided in our quest for moral responsibility by responsiveness to reasons, but not determined by it (Watson 2001: 375). This ethic implies taking a broad, inclusive view.

Recognition of an unqualified and almost limitless responsibility towards the “other” constitutes the moral agent (Bauman 1993: 52); no reward or reciprocity is expected. The relationship is, therefore, not contractual. Contractuality neutralises any thoughts of real morality (Bauman 1993: 58).¹⁸ “Responsibility” is “unbearable silent” (Bauman 1993: 78-9). This translates into an understanding which claims that accepting responsibility implies forsaking the moral security of convention, rules and appearances. Moral responsibility is a fundamental, troubling, powerless and disarming authority; troubling because it is vague in the sense of an absence of directing rules to guarantee correctness. It is fundamentally contextual (Bauman 1993: 80). This moral uncertainty/anxiety leading to self-critical reflection — have I done enough; what is enough? — is the only foundation of morality. The yearning to moral action, not moral action as such, constitutes the moral self. Authenticity demands that morality does not remain totally theoretical (Bauman 1993: 81).

Hans Jonas (1984: 90) argues that any concept of responsibility implies the belief “that acting makes an impact on the world”, “that such acting is under the agent’s control”, and that the consequences of action are to some extent foreseeable. His notion implies two propositions: “accountability ‘for’ one’s deeds” and “‘for’ particular objects”. Formal responsibility implies a direct, causal responsibility and legal liability; a precondition “but not yet itself morality” (Jonas 1984:

stipulates. It is I who take the responsibility, and I may take that responsibility [...] as if it was mine without ever being taken by me. My responsibility, which constitutes, simultaneously, the Other as the Face and me as the moral self, is unconditional.”

18 To illustrate the awesome implications of this notion of ultimate responsibility, Bauman (1993: 80) recounts the history of Władysław Bartoszewski, who rescued many Polish Nazi victims, and said of his attempts: “Only those who died bringing help can say that they have done enough.”

92). Accepting responsibility is not necessarily a moral deed; it is not enough. To this needs to be added a substantive responsibility (Jonas 1984: 92-3), implying responsibility not only for past conduct and its consequences, but also “for the matter that has a claim on my acting”. My responsibility does not merely cause me to screen actions for moral acceptability, but pro-actively reflects on actions not otherwise contemplated. I am obliged to act since I have the power to do so. The dependence of the moral other commands my action. Moral responsibility implies the conjoining of need and power to act.

To act responsibly may mean to disregard rules, conventions and appearance, to look the “Moral Other” in the eye; to make myself aware of and accountable for her needs without any hint of contractual reciprocity. Jonas (1984: 94) argues that “only one who has responsibility can act irresponsibly”. When circumstances place the fate of others in my care, my control over their fate implies a distinct moral obligation. If I disregard this, I act irresponsibly. Jonas argues that this responsibility can never apply with moral equals, since it is by nature non-contractual. “Horizontal” responsibilities tend to be contractual; “vertical” responsibilities are more inclined to be moral. This responsibility is “as unconditional and irrevocable as any posited by nature” (Jonas 1984: 95), for example parental responsibilities. “Other human subjects” are therefore the primary objects of responsibility (Jonas 1984: 98). For Jonas, “responsibility is first and foremost of men to men”. Since it is only man who can have responsibility, it means also that s/he “must have it for others of his like”; it is “concretely given with the very existence of man” (Jonas 1984: 99). Responsibility spans both time and space. The parallels between this notion of responsibility and responsible medical practice are self-evident.

A conception of an ethic of responsibility can be distilled into the following viewpoint (based on Van Niekerk 2002: 35-43): this ethic makes all people accept responsibility for the creations of science and technology. It denies that “morality is exclusively determined by rules, codes and laws behind which people can comfortably hide when justifying the morality of actions in morally complex situations”. The “only sustainably-defensible basis for morality” is that I am accountable to the unconditional claim that others make on me to have

their interests at heart, irrespective of their reciprocity. An ethics of responsibility grapples with the “quagmire of new, unprecedented challenges springing from technological innovation”. This is not a recipe for infallible moral decisions but an attempt to guide us between the extremes of total trust in science and medicine, and of the presumption of moral infallibility. An ethics of responsibility “recognizes the fallibility of human insight”. The moral debate is no longer restricted to the realm of “ethics specialists”. This means empowerment of all involved in patient care and decision-making, extending to the general public since they are the final decision makers (and patients).

But why should the combination of complexity theory, the ethics of postmodernity, and (in particular) an ethic of responsibility, have some allure for the bioethicist? The reason is quite evident: it is because there is a “natural”, hand-in-glove affinity between these three entities. Postmodern society is complex; the human body is complex; the practice of medicine is complex; and therefore it stands to reason that the ethics of biomedicine, if it aims to be relevant and contextual, should acknowledge this complexity.

The human body and its subsystems can be described as systems of complexity in the following way, using the example of the central nervous system with its innumerable inter-neuronal connections: Each neuron (and/or groups of neurons) can be seen as an element, the basic building block of the complex system. Each has numerous, potentially innumerable connections (synapses), with numerous/innumerable other neurons. The action of each neuron is, on the face of it, simple (as is the “action” — the transfer of a limited amount of information — between elements in any complex system). It either releases a certain amount (more or less, depending on circumstances) of the neurotransmitter stored in its intracellular vesicles (eg adrenaline, nor-adrenaline, serotonin), thereby stimulating or inhibiting its neighbour, or it does not, and does not stimulate or inhibit the latter. Yet the complexity of its connections and pattern of stimulation, within the sum-total of the actions of the millions of other neurons/groups of neurons that make up the cell mass of the brain, make the actions of the system typical of great complexity. These actions are non-linear, well-

nigh unpredictable, and open-ended (may be influenced by other sensory and knowledge/information input, activity in other systems and organs, emotions, and so forth). No single neuron/group has “control” over the actions of those it influences, or the system as a whole, and neither is it in turn controlled by any single neuron/group, nor is there any over-riding or meta-control. Nevertheless, powerful impulse-clusters — such as strong emotions or significant sensory input — can permeate and influence the whole system (one of the most powerful extraneous influence is the electric shock of electro-convulsive therapy, which, after years of disfavour, has found new favour among clinicians). The total number nodes or points of contact (synapses) where energy is transferred and the number of interactions is thus vast, and complex context-sensitive patterns encode information, create meaning and make sense of all of this. True to complexity, “meaning” in this sense is contextual, temporary and subject to constant revision based on continuous fresh information.

Other functions of the human body can also be described in terms of complexity theory. Consider the complex way in which the heart or lungs respond to a myriad of interrelated impulses, some humorally transferred, others via the nervous system. The pulse rate, stroke volume and cardiac output, for example, vary constantly, subject to a variety of inputs. It therefore stands to reason that therapeutic interventions slide into and form part of this complex system (or should one use the plural?). It is true that therapy usually has rather limited and particular aims — eg killing off certain pathogenic bugs that happen to have made a particular body their temporary home, or to improve cardiac output or decrease heart rate. But it is immediately equally true that most of our goal-directed treatment modalities have effects — which doctors have learnt to call “side effects” — which often are as significant as the primary objectives and effects of medication. Few physicians realise, actively contemplate, or, very frequently, understand this. Not all of these effects are necessarily detrimental, or seriously so; the point is, however, that if one fiddles with the unsteady “state” of a complex system (complex in respect both of the ordinary meaning of the word, ie complicated, but also in the rather specialised meaning allied to complexity theory; the

reader will also remember that we stated earlier that there is no equilibrium in a complex system), the results are bound to be as complex as the system itself. Particular areas of highly specialised medicine are especially complex in both senses; for example, anaesthesiology and intensive care medicine often utilise a variety of agents to manipulate function (the end-point, unfortunately, in intensive care medicine, is often the normalisation of “numbers” without a clear predictable improvement of final outcome).

It thus stands to reason that the ethics that we should “employ” to describe, evaluate, judge and perhaps influence these complex actions and activities, would of necessity have to be equally complex. And this is our quest: to apply the ideas that emanate from the preceding to the practice of medicine and its ethics. We suggest that an ethic of responsibility is most suited to our project. There are a number of “principles” that, true to the spirit of complexity, seem to present themselves as coat-hangers for practical use. The key words are contextuality, inclusivity, comprehensiveness, open-endedness and revision.

Formal, Kantian or utilitarian theories may have limited application in bioethics (eg utilitarian principles in budget allocation, and some form of consequentialism in outcome-based medicine), but for real day-to-day moral dilemmas we require a situation-based approach. This means that we have no choice but to take context into consideration. We need to “discover” what is right for this patient in these particular conditions and circumstances. This underlines the uniqueness of each person and his or her situation. Of course this implies that we have a contextual knowledge and understanding of the circumstances of each individual (no ivory-towerism!). In order to obtain this information we need to consult widely, inclusively, indeed comprehensively. There is no “quick-fix”; we need to listen with a nuanced ear to the many and varied inputs we are bound to (obliged to) receive. The ideal — though we grant that this may not always be possible — would be a decision that, as it were, “emerges” from this ethical melee.

But is there still a role for the so-called “ethical specialist” and other knowledgeable persons (those against whom Winkler & Coombs rebel), given this irreducible contextualisation? We wish to argue

that their role is extremely important, even essential. The type of input they can provide will permeate through the whole complex system of positions involved and influence it in important ways (think of, for example, the legal implications of certain decisions and/or omissions which require expert opinion). Their role could also include the facilitation of discussion, keeping it, as it were, on the right track, or re-initiate it when it grinds to a halt, without falling into rule-bound or rule-quoting decision-making processes. And once decisions are made, they can remind those involved that these decisions are nevertheless contextual, tentative, subject to revision and not hard-and-fast universalizable rules. They will have to be reconsidered as time goes by and when other apparently similar cases arise.

This ethic has a very important ultimate “purpose” or “function”. Jonas (1984: 99) argues that the “dignity of man can only be spoken of as potential”. Man, therefore, first has to exist, and continue to exist to keep open this “ever-transcendent possibility”. Morality is a “transcendence” of being; “more precisely, of the chance of such transcendence” (Bauman 1993: 72). The “first commandment” is therefore that men live on earth; “that they live well is the second commandment” (Jonas 1984: 99). Humankind has a “kind of metaphysical responsibility beyond self-interest” (Jonas 1984: 136); this commandment underlines bioethical responsibility.^{19,20}

7. Conclusion

We have attempted to show how arguments from a postmodern perspective resist general solutions to ethical problems, with specific reference to bioethical issues. The charge that postmodern ethics leads to a free-for-all relativism has been rejected by showing that

19 “Nature could not have incurred a greater hazard than to produce man” (Jonas 1984: 138)

20 Jonas says that not only should humankind survive for her/his own sake, but what s/he has done to “nature” implies an additional imperative to continued survival; only humankind can clear up the mess s/he has made through ecological intervention and the often unintended consequences of scientific and technological developments!

complex problems cannot be addressed in a generalised or universal way. The acknowledgement that what we deal with is complex introduces an irreducible contingency into the consideration of every ethical dilemma. This acknowledgement compels us not to rely on universal ethical principles which are generated without taking the contingent factors involved in each case into consideration. Everyone involved in the making of a decision has to assume the responsibility for that decision despite the fact that we know beforehand that a perfect decision cannot be made.

Despite the practical nature of bioethical dilemmas, and despite the fact that real action must follow the decision, this responsibility cannot be shifted onto legal or moral rules, or onto institutions. We have to get involved in the nitty-gritty of each particular issue. The acceptance of the responsibility for the actual decisions we make is certainly less comfortable than merely applying a generalised solution. The resulting provisionality of our decisions means that we can never escape the dilemma of trying to make a just decision whilst realising that we cannot be fully just, and this leads to a certain tension. Nevertheless, we cannot escape this tension without losing our humanity.

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