Jonathan Edwards and a reformational view of the purpose of education

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I dedicate this dissertation to my mother, Marisa Linde. She is the best example I have of a teacher who helps her learners see the glory of God in creation.
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PREAMBLE

Key terms: Jonathan Edwards, Purpose of Education, Christian Education, Spirituality, Reformational Philosophy

Increasingly, calls are being heard for the integration of spirituality into formal education. The emphasis seems to be on spirituality as ‘connection’ - whether a ‘deep connection’ between the teacher, the learner and the object(s) of study (Jones 2005:6; cf. Palmer, 1993:88-89), connection between the learner and the world (Wane & Ritskes 2011:xvi; Van der Walt & Potgieter 2011:81; Dayton, 2015:2), or connection between knowledge and ethical behaviour (Culham, 2015:309). These are only a few examples - indeed, as Vokey (2003:174) suggests, approaches to spirituality in education are as varied as views of ‘what it is that we are currently alienated from’.

The search for spirituality in education is fundamentally related to the question: what is the purpose of education? This is illustrated by Carr and Haldane (2003:2), for instance, when they explain their and their co-workers’ interest in the relation between education and spirituality as being an interest in ‘the question of what schooling might aim for in the field of personal formation beyond the acquisition of transferable skills and broad social values’. Acknowledging that there is no religiously neutral view of spirituality or of the purpose of education, the present study aims at contributing to a Christian, specifically a reformational approach to these issues as they pertain to school education. The question that this study is specifically concerned with, is: How can the purpose of school education be understood in such a way as to do justice to the contemporary search for spirituality (or spiritual ‘connection’) in education?

In an attempt to contribute to an answer to this question, the present study explores and seeks to apply the thought of the philosopher-theologian Jonathan Edwards (1703 – 1758). The focus is on Edwards’ understanding of the relation between God and his creation, since the relation between God and creation is what should provide the framework for a reformational view of spirituality (and its place in education). Edwards is well known for the remarkable ways in which he conceptualised the ‘God-relatedness’ of the world, partly in response to mechanist and deist influences of his time (Marsden, 2003:73, 460).

The study commences with a brief introduction to Edwards’ worldview and ontology, paying special attention to his understanding of the relation between God and creation. Secondly, three recurrent philosophical themes in Edwards’ thought are explored, as they arise from his understanding of the relation between God and creation. Thirdly, applications of these themes to the question of the
purpose of school education are suggested. Finally, a preliminary evaluation is made of the potential of Edwards' thought for a reformational view of the purpose of education.

The following resources were consulted: Works of Jonathan Edwards Online, Jonathan Edwards Studies (online journal), Library catalogue of the North-West University, research articles through Ebsco-host database, and dissertations and theses through ProQuest database.

The mini-dissertation is presented in the form of an article, in accordance with rule A.7.2.5 of the ‘General Academic Rules’ of the North-West University. The article will soon be presented for publication in the journal *In die Skriflig/In Luce Verbi*. This journal’s style and referencing requirements are included as an appendix.

The article contains the following subdivisions (numbered only here and not in the article itself, in accordance with the style requirements of *In die Skriflig/In Luce Verbi*):

1. Introduction
2. Created reality as related to God
3. Knowledge as the true perception of relations
4. Human beings as creation’s consciousness
5. Sound morality as arising from true perception
6. An application to the question of the purpose of education
7. A preliminary evaluation from a reformational philosophical perspective
8. Conclusion

The research article includes a summary in English and Afrikaans, in accordance with the requirements of *In die Skriflig/In Luce Verbi*. The research article is followed by a section in which the contributions of the study, the limitations of the study and suggestions for further research are reflected on. Finally, an appendix is given with the style and reference requirements provided by *In die Skriflig/In Luce Verbi*. 
Abstract: Jonathan Edwards and a reformational view of the purpose of education

The contemporary quest for spirituality (or spiritual ‘connection’) in formal education can be linked to the question: what is education for? The present article is concerned with contributing to a reformational approach to the question of the purpose of education, with specific reference to spirituality. From a reformational perspective, spirituality should be understood within the framework of the relation between God and his creation. In this article I turn to the thought of Jonathan Edwards (1703 – 1758), a philosopher-theologian who was convinced that the world exists to communicate the glory of God. This conception of the relation between God and creation gave rise to three recurrent themes in Edwards’ philosophy which, I will argue, may be conducive to a reformational understanding of the purpose of education. These themes may provide us with ways of conceptualising various types of spiritual ‘connection’ in school education. The three philosophical themes are: (1) knowledge as the true perception of relations; (2) human beings as creation’s consciousness; and (3) sound morality as arising from true perception. Provided that certain weak points (from a reformational philosophical point of view) are adjusted, these themes can be fruitfully applied to the question of the purpose of education.

Opsomming: Jonathan Edwards en ’n reformatoriese beskouing van die doel van onderwys

Die hedendaagse soeke na spiritualiteit (of spirituele ‘verbinding’) in die onderwys kan verbind word met die vraag: wat is die doel van onderwys? Hierdie artikel het ten doel om by te dra tot ’n reformatoriese benadering tot die vraag na die doel van onderwys, met spesifieke verwysing na spiritualiteit. Vanuit ’n reformatoriese perspektief behoort spiritualiteit binne die raamwerk van die verhouding tussen God en sy skepping verstaan te word. In hierdie artikel wend ek my tot die denke van Jonathan Edwards (1703 – 1758), ’n filosoof-teoloog wat daarvan oortuig was dat die wêreld bestaan om die heerlikheid van God te kommunikeer. Hierdie beskouing van die verhoudingtussen God en sy skepping het aanleiding gegee tot drie deurlopende temas in Edwards se filosofie wat (so word aangevoer) bevorderlik kan wees vir ’n reformatoriese verstaan van die doel van onderwys. Hierdie temas mag ons van maniere voorsien waarop verskeie vorme van spirituele ‘verbinding’ in skoolonderrig gekonseptualiseer kan word. Die drie filosofiese temas is naamlik: (1) kennis as die ware aanskouing van relasies; (2) die mens as die bewussyn van die skepping; en (3) toepaslike moraliteit as voortspruitend uit ware aanskouing. Mits sekere swakpunte (vanuit ’n reformatoriese filosofiese oogpunt beskou) aangepas word, kan hierdie temas met vrug toegepas word word op die vraag na die doel van onderwys.
Jonathan Edwards and a reformational view of the purpose of education

Introduction

Increasingly, calls are being made for the integration of spirituality into formal education. It seems that this is a reflection of a wider ‘turn’ to spirituality in public life and in academia, which Kourie (2006:35) sees as ‘an indication of a deep-felt desire within the hearts of women and men to find unity and wholeness, both individually and in society’.

There remains, within academic discourse, a lack of clearly defined criteria for the investigation and evaluation of spirituality (Botha, 2006:95; Anderson & Grice, 2014:15). The same can be said of discourse regarding spirituality in formal education (cf. Dayton, 2015:1). However, discussions in this area seem to have a specific emphasis in common. The emphasis here is on spirituality as ‘connection’, whether a ‘deep connection’ between the teacher, the learner and the object(s) of study (Jones, 2005:6; cf. Palmer, 1993:88-89), connection between the learner and the world (Wane & Ritskes, 2011:xvi; Dayton, 2015:2) or connection between knowledge and moral behaviour (Culham, 2015:309). As shown by these examples, there is no clear consensus regarding the kind of ‘connection’ that should be striven for in education. Vokey (2003:174) seems to be correct in suggesting that approaches to spirituality in education are as varied as views of ‘what it is that we are currently alienated from’.

The search for spirituality in education, then, can to a large extent be understood as a reaction to perceived alienation or ‘disconnection’ in contemporary education (cf. Palmer, 1993:x). More fundamentally, the search for spirituality has to do with the question: what is the purpose of education? This is illustrated by Carr and Haldane (2003:2) when they explain their and their co-workers’ interest in the relation between education and spirituality as being an interest in ‘the question of what schooling might aim for in the field of personal formation beyond the acquisition of transferable skills and broad social values’.

On the negative side, the perceived lack of spirituality in contemporary education is often attributed to wrong or narrow conceptions of the purpose of education. Palmer (1993:7-8), for instance, interprets the ‘disconnection’ in education as arising from the motives which have underlain the modern search for knowledge, namely, those of curiosity and control. Both these motives create distance between the learner and his or her world. Kawano (2011:106), again, regards the threat to
‘the development of a sense of interconnectedness’ in schooling as coming from a worldwide prioritisation of economic goals.¹

Acknowledging that there is no religiously neutral view of spirituality or of the purpose of education, the present article is concerned with contributing to a Christian, specifically a reformational² approach to this issue. Van der Walt et al (2008:13) have highlighted the contemporary need for working towards a better understanding of biblical spirituality and its place in education. The question that will specifically be dealt with in this article is: How can the purpose of school education be understood in such a way as to do justice to the contemporary search for spirituality (or spiritual ‘connection’) in education?

From a reformational perspective, spirituality should be understood within the framework of the relation between God and his creation.³ In this article I will turn to the works of the philosopher-theologian Jonathan Edwards (1703 – 1758), exploring his understanding of this relation. Edwards’ worldview and philosophy⁴ will first briefly be presented, with the focus on his understanding of the relation between God and created reality. This will be followed by an exploration of three recurrent

¹ Palmer’s and Kawano’s somewhat different diagnoses are in tune with the observation of Goheen (2002) that, whereas the modern ideal of progress through science and reason had formerly driven Western education, it has now been replaced by economistic and consumerist ideals (cf. Postman, 1996:19-58). Arguably, economism and consumerism are simply new appearances of the ideal or motive of ‘control’ (Palmer, 1993:7-8). According to Fowler (1990b:70), this ideal (which he terms the ideal of ‘autonomous human mastery’) is shaping postmodern education as much as it has shaped modern education.

² An approach can be described as ‘reformational’ if it takes God’s revelation in the Bible as starting point, recognising that it ‘touches the heart, the religious root, of humankind and therefore cannot remain restricted to church life and religion in its narrow sense, but must come to expression in all walks of life’ (Strauss, 2012:1). Reformational philosophy, with Herman Dooyeweerd (1894 – 1977) and D.H. Th. Vollenhoven (1892 – 1978) generally regarded as its foundational figures, accordingly seeks to understand all of reality in light of the major motives of Scripture: creation, fall and redemption (Wolters, 2005).

³ I will deliberately use the term ‘relation’ (instead of ‘connection’) when what is in view is specifically an understanding of spiritual ‘connection’ that is informed by the belief in a personal God. Reformational anthropology does not allow for a view of spirituality in which the latter is seen as an ‘add-on’, or a donum superadditum, to human life. Rather, human life at its very centre is seen as being related to God (‘religious’). The religious centre of human life, which may be called the ‘heart’ (Prov. 4:23) or, alternatively, the ‘spirit’ or the ‘soul’ (Vollenhoven, 2005:61), is directed either towards God in obedience to his covenant call, or away from him in disobedience (Vollenhoven, 2005:78). I will return to this point in the last section, when evaluating Edwards’ thought.

⁴ Edwards was first and foremost not a philosopher, but a pastor and theologian. When referring to his ‘worldview’, I have in mind the pre-scientific views and reflections encountered in writings such as his diary, his letters and some of his notebook entries. Yet, Edwards has also become known (especially since the publication of his biography by Perry Miller in 1949) for the philosophical views and arguments expressed especially in some of his larger works. These bear witness to a mind who relentlessly sought, in the face of Enlightenment philosophy, to understand the universe as a place where ‘everything is related because everything is related to God’ (Marsden, 2003:460). Arguably, in Edwards’ work the boundaries between theology, worldview and philosophy are not always easy to trace.
philosophical themes in Edwards’ writings which, as I will argue, have arisen from his understanding of the relation between God and creation. Thirdly, I will suggest applications of these three themes to the question of the purpose of school education, paying special attention to the matter of spirituality in education. A few of Edwards’ own educational ideas will be integrated into the discussion.  

Lastly, a preliminary evaluation of the potential of Edwards’ thought will be made from a reformational philosophical point of view. It is hoped that the explored themes may prove conducive to a reformational understanding of the purpose of education in which biblical spirituality is well accounted for.

**Created reality as related to God**

Edwards, a Presbyterian pastor-theologian whose preaching would stir New England’s First Great Awakening (1730s to 1740s), had himself experienced a spiritual awakening at the age of seventeen. Upon reading the words of 1 Timothy 1:17, ‘Now unto the King eternal, immortal, invisible, the only wise God, be honour and glory forever and ever, Amen’, Edwards felt a ‘sense of the glory of the divine being’ which ‘gradually increased’, so that ‘[t]he appearance of everything was altered: there seemed to be, as it were, a calm, sweet cast, or appearance of divine glory, in almost everything’ (Edwards, 1998:792-793). This event, as an expansive body of sermons, essays and notebook entries indicates, would subsequently shape his whole life and thought (cf. Noll, 1995:145).

Edwards would never explain his sense of God’s glory ‘in almost everything’ as the merely subjective act of an impassioned imagination. In one of his last completed works, ‘Dissertation concerning the end for which God created the world’, he provides a firm ontological basis for the human experience of the glory of God in creation. Creation is here described as God’s purposeful communication of his glory, both through creation, as it came into existence, and to creation, as it already exists (Edwards, 1989:432-437, 441-442). Creation is therefore related to God as a purposeful act is related to its subject. Edwards goes as far as to say that the universe may be regarded as ‘created out of nothing every moment’ (Edwards, 1980c:241).

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5 See Minkema (2011) for an overview of Edwards’ educational work and thought.
6 Edwards’ complete work was recently published online by Yale University in seventy-three volumes (see http://edwards.yale.edu).
7 Edward’s biographer Marsden (2003:525), following George Claghorn, views the idea of continuous creation as being in line with Scripture. Although one might interpret Edwards’ understanding of it as an instance of occasionalism (as Crisp (2010) does), Edwards himself never denies that God’s continuous exertion of his
Given the prevalence of mechanistic science and philosophy in his time, it is quite understandable that Edwards would see the need for emphasising created reality as an ongoing act of God. The mechanistic conception of nature is that of a 'self-contained and independent reality, a self-inclusive machine running by itself according to abstract, universal laws of nature' (Zakai, 2002:19). It is this conception that Edwards was contending against, even while acknowledging and marvelling at new discoveries (such as those made by Newton) of the ‘laws of nature’. For Edwards, the laws of nature, together with all of reality, were conceivable only in relation to God. '[T]o 'find out the reasons of things in natural philosophy', he (1980e:353) insisted, 'is only to find out the proportion of God's acting'. Even ‘matter’ could be regarded as the immediate exercise of the divine power in a particular way (Edwards, 1980b:215; 1980c:235).

The dynamism in Edwards’ worldview is teleologically motivated. While natural laws do exist, they exist only to serve the purposes of God, who, ‘in all things, acts as being limited and directed in nothing but his own wisdom’ (Edwards, 2004:202). From Scripture Edwards found ample evidence that the ultimate purpose with which God has created is to communicate his glory. This ‘glory’ was understood by Edwards mainly to consist of the knowledge, love and joy that exist between the three Persons of the Trinity (Edwards 1989:432-437, 441-442, 531).

It can be said of Edwards’ worldview and ontology that they are saturated with his conception of God’s glory (cf. Sairsingh, 1986:3). If Edwards has something to offer to our present inquiry, it will be due to the ‘dialectical fearlessness’ (McClymond & Reinke, 2012) with which he worked out the implications of this worldview and ontology in areas such as epistemology, anthropology and ethics. In the sections to follow, I will turn to Edwards’ ideas within these three areas, focusing specifically on three recurrent themes. I take each of these three themes to be, to a certain extent at least, a philosophical outcome of Edwards’ view of the world as ‘God-related’. This, as I will seek to show, makes them relevant for our present inquiry.

The following three themes will be investigated and applied to the question of the purpose of education (specifically with reference to spirituality): (1) knowledge as the true perception of relations; (2) human beings as creation’s consciousness; and (3) sound morality as a rising from true perception.

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power includes the establishment and upholding of ‘particular laws of nature with respect to particular creatures’ (Edwards 2004:205; cf. Louie 2007:71).
Knowledge as the true perception of relations

Following Locke, Edwards (1980e:347) regards the ‘simple ideas’, gained by sensory experience, as instrumental to all knowledge. However, as argued by Lee (1988:123-125), the relational ontology of Edwards provides him with an escape-route from Lockean rationalism. In Edwards’ own words, knowing truth is to perceive ‘the relation between the ideas’, while falsehood is ‘an inconsistent supposition of relations’ (Edwards, 1980:340). This should not be taken to mean that one may have a true idea of something and yet fail to see it in its right relation to other things. For Edwards, the being of anything is bound up so closely with its relations to other things that, ‘if the idea [of it] were perfect, it would be impossible but that all its relations should be perfectly perceived’ (Edwards, 1980:340).

How is it possible, then, for the mind to ‘perceive’ relations between its ideas? Put differently: How can one perceptively know not only individual things, but also the relations in which these things exist? It is important to observe, in this regard, that Edwards’ concern with ‘relations’ is at the same time a concern with beauty. Beauty can be said to consist in harmonious relations, often referred to by Edwards (cf. 1980d:305) as ‘consents’. In the case of outwardly perceptible beauty, consents consist in equality and proportion (Edwards, 1980e:380). There is also beauty in less apparent types of proportion, found in things such as justice, order in society and a life lived wisely (Edwards, 1989:568-569). Love is considered by Edwards (1989:564) to be the most beautiful, since it consists of purposeful consent between spiritual beings.

Beauty, or ‘excellence’ (virtually synonymous terms for Edwards (cf. 1980e:344, 382)), is ‘what we are more concerned with than anything else’ (Edwards, 1980e:332). As a result, the mind is ‘abundantly active’. It is continually bringing ‘its ideas into contemplation’, and ‘ranging and comparing’ them ‘in reflection and abstraction’ (Edwards, 1980e:374). In short, the mind is continually relating its ideas, in order that it may know the objects of these ideas, and the world itself, in their beauty or deformity.

It is now possible to explain why Edwards wants the knowledge of relations to be understood as a form of perception. To know things for their beauty or deformity is to know them in ‘their relation to our wills, and affections, and interest, as good or evil, important or otherwise, and [in] the respect they bear to our happiness or misery’ (Edwards, 1999b:460). This mode of knowing is referred to by Edwards as ‘sensible’ knowledge, since, like sensory perceptions, it is accompanied immediately by pleasure or displeasure. It is to be distinguished from ‘speculative’ or ‘notional’ knowledge, which does not impact us affectively. Moreover, it can and should be the outcome of ‘speculative’
knowledge. Ultimately, as Edwards (1999b:459-460) sees it, ‘we are concerned to know nothing on any other account than as it pertains to our affections’.

There is another reason, besides its being of an affective nature, that the knowledge of relations can be called ‘perception’. As with sensory perception, the knowledge of relations is a response – whether true or false – to realities that exist independently of the mind. Beauty is not a human construct, but is interwoven into a world which exists to communicate the glory of God. All people can appreciate beauty in the harmonious relations which exist, for example, in nature and in a just and well-ordered society. The appreciation of these kinds of beauty is due to ‘a law of nature, which God has fixed’ (Edwards, 1989:565). However, since all things are ultimately related to God, ‘of whom, ‘through whom and ‘to whom everything exists (Edwards, 1989:551), the ultimate beauty (or deformity) of things can be perceived only when the mind’s relating activity is governed by the knowledge of God.

How, then, is the knowledge of God to be gained? Also in this regard Edwards sees no reason to depart from an empiricist understanding (Plantinga, 2000:299). Recall that he describes his own conversion as having entailed a ‘sense’ of God’s glory. In his ‘Treatise concerning religious affections’ he argues that essential to regeneration is ‘a new spiritual sense (…) or a principle of new kind of perception or spiritual sensation’ (Edwards, 1959:205). This sense is called ‘spiritual’ due to its being given by the Spirit (cf. Edwards, 1959:198). Through it, the glory of God, as revealed in Scripture, is not simply known of, but known as if sensibly perceived or ‘tasted’ (cf. Edwards, 1959:259-260). Just as tasting something good is accompanied by pleasure, so knowing God’s glory through the spiritual sense entails delighting in it (cf. Edwards, 1959:260; 1994:200).

In ‘Religious affections’, Edwards’ use of ‘infusion’ language leads one to suspect that he regards the spiritual sense as a supernatural gift bestowed to believers (cf. Choi, 2010:280). In other places (cf. Edwards, 1999b:413; 2000:459), it seems that the spiritual sense is to be taken as the spiritual renewal of the mind, especially in its affective functioning. In whichever way Edwards’ conception of the spiritual sense is interpreted, two things deserve our notice. In the first place, it should be recognised that Edwards holds firmly to a Calvinistic view of sin and depravity. He understands the noetic effects of sin to be so pervasive that nothing but ‘immediate divine assistance’ can give to someone ‘a sense of spiritual and eternal things’ (Edwards, 2000:462, cf. Oliphint, 2003). Secondly, it should be noticed that the spiritual sense, as understood by Edwards, both ‘incorporates and

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8 Edwards (1999b:412) elsewhere emphasises, against ‘some enthusiasts’: ‘But this spiritual light that I am speaking of, is quite a different thing from inspiration: it reveals no new doctrine, it suggests no new proposition to the mind, it teaches no new thing of God, or Christ, or another world, not taught in the Bible; but only gives a due apprehension of those things that are taught in the Word of God.’
enhances natural modes of perception’ (Lane, 2004:46). Within those who are endowed with the spiritual sense, the perception of outward beauty may ‘enliven (…) a sense of spiritual beauty’ (Edwards, 1989:565). Then the world can be known and enjoyed for what it truly is: the communication of the glory of God, who is himself the ‘foundation and fountain of all being and all beauty’ (Edwards, 1989:551).

Is Edwards guilty of overemphasising beauty in his understanding of the world and of the glory of God? It is important here to recognise that Edwards’ use of the word ‘beauty’ is not confined to aesthetic concepts. Frequently, words such as ‘loveliness’, ‘excellence’ ‘glory’ are employed as synonyms for beauty (cf. Edwards, 1959:243; 1999b:413). It would be an oversimplification, therefore, to trace directly an aesthetic reductionism in Edwards’ thought. However, since Edwards understands beauty to consist in harmonious relations (consents) – whether these relations be aesthetic, societal, or ethical – a more important question is if Edwards might not be emphasising relationality to such an extent that the reality of entities is lost out of sight. This question must be left for future research.. For the present it is important to recognise, as Strauss (2013) points out, that an overemphasis on relations easily fits together with the reduction of reality to some creational aspect. This is certainly a concern that is of general relevance for the topic of spirituality (or spiritual ‘connection’) in education.

In this section it was seen that, according to Edwards, knowing things in their right relations requires knowing them in their relation to God’s glory. In the following section, it will be shown that there is a logical prerequisite to such knowledge. This prerequisite is that things will be known in their relation to human beings.

**Human beings as creation’s consciousness**

As far as creation is concerned, Edwards is unashamedly anthropocentric. This is to be expected, given the central place of communication in his worldview. If the world exists to communicate, it may as well not exist if there are no conscious receptors of its message (Edwards, 1989:431). Thus the position of ‘consciousness’ is of ontological importance (cf. Edwards, 1989:432). It is a position which human beings (together with the angels) hold, due to their rational, affective and moral capabilities.

This view of the relation between the non-human creation and human beings has profound implications for Edwards’ understanding of both. The non-human creation (with the exception of angels) is teleologically subordinated to human beings. It achieves its purpose through serving as the ‘house’ wherein its human inhabitants may achieve theirs (cf. Edwards, 1989:470-471).
Edwards continually marvels at the various ways in which creation serves humanity’s best interests. An example of this comes from the famous ‘Spider letter’ which he wrote to the Royal Society of London, probably hoping for its publication in their scientific paper (Anderson, 1980:151). Edwards’ careful observations of the ways in which spiders spin and move along their webs moves him to lyrical praise at ‘the exuberant goodness of the Creator, who hath not only provided for all the necessities, but also for the pleasure and recreation of all sorts of creatures’ (Edwards, 1980:167).

Yet, although ‘recreation’ must be one purpose behind this ability of spiders, Edwards believes that an even ‘greater end’ is their own destruction. Due to reasons connected to their web-spinning habits, large numbers of spiders are annually taken off by the wind and drowned in the ocean. In this, God’s wisdom is even further displayed, since ‘great inconveniences’ to people are thereby prevented (Edwards, 1980:167-168). Clearly, in Edwards’ view, even a spider’s functioning can be comprehended only if perceived within a broader teleological framework, where priority is assigned to human beings.

To say that non-human creation serves human needs and convenience is not yet to say that non-human creation is communication and human beings the conscious receptors of this communication. However, this relation is implied throughout Edwards’ writings. The wonders of creation are meant to display God’s ‘goodness’ and his ‘wisdom’. As our example has shown, Edwards sees the non-human creation displaying God’s goodness and wisdom especially in the ways that it serves human interests. In the case of the redeemed, or those in ‘[u]nion with Christ’, he states it quite radically:

> Every atom in the universe is managed by Christ so as to be most to the advantage of the Christian, every particle of air or every ray of the sun. (Edwards, 1994:184)

The priority that human beings have in Edwards’ scheme cannot be interpreted as a licence for doing with creation as we please. Edwards’ view of human beings as creation’s ‘consciousness’ prohibits such an interpretation. Humans’ ultimate purpose is to perceive the glory of God. This is also where their best interest, or their utmost ‘happiness’, lies (cf. Edwards, 1999a:72). Moreover, it entails great responsibility. It is only through its ‘consciousness’ that creation can fulfil its ultimate purpose, which is to make known the glory of God.

We now turn to the important question of how, in Edwards’ view, human beings are able to fulfil their responsibility as creation’s ‘consciousness’. Edwards’ conception of the ‘spiritual sense’ is again at play here. It is telling that, in the two notebook entries where Edwards refers to human beings as ‘consciousness’, the emphasis is not on cognitive understanding but on happiness. ‘Happiness’ is considered by Edwards (1994:200) as the natural result of understanding God’s glory:
An understanding of the perfections of God, merely, cannot be the end of the creation; for [one] had as good not understand it, as see it and not be at all moved with joy at the sight.

Thus, the role of consciousness can be fulfilled only if the understanding of God’s glory is coupled with fitting affective response. Understanding and affective response are not polar opposites, but function in union within the mode of knowing that is enabled through the ‘spiritual sense’, as described in the previous section. This sense is elsewhere described by Edwards as a ‘sense of the heart, wherein the mind don’t only speculate and behold, but relishes and feels’ (Edwards, 1959:272). Moreover, as will be expounded on in the following section, it is largely this mode of knowing that will induce a person to act (Edwards, 1959:101).

**Sound morality as arising from true perception**

In the discourse on spirituality in education, concerns with the ethical outcomes of education occupy an important place. This merits a brief discussion of a theme in Edwards’ ethical thought, especially as his ethics is intricately linked to the first two themes discussed above.9

Edwards’ ethics is the counterpart of his view of human beings as ‘consciousness’. Not only are human beings meant to receive the communication of God’s glory; they are also meant to respond to this glory by conforming their lives to it. For Edwards, then, moral goodness starts with true perception. The abiding sense of God’s glory does not lead to otherworldliness. On the contrary, just as God’s love for himself causes him to love creation, being the communication of his glory (Edwards, 1989:461-2), so the love of a regenerate person is primarily towards God and, consequently and simultaneously, towards all that God has created. Moreover, the love which directs a regenerate person towards God and towards creation is the direct operation of God’s own love. Edwards is led to this conclusion by his understanding of the work of the Holy Spirit. According to Choi (2010:277), this understanding helps Edwards in emphasising

(... the intimate and direct involvement of God in all aspects of human affairs while eschewing a simple deterministic and heteronomous understanding of divine action. Insofar as the Spirit orients and directs anew the creature’s powers of knowing and choosing, the human as moral agent is preserved when made to participate in God’s overflowing fullness.

As with true perception, sound morality is understood by Edwards as a gift from God through his Spirit. A person with sound (that is, Spirit-given) morality is an active agent in God’s plan to communicate his glory through creation. In fact, according to Edwards, of all earthly creation it is only the human being that can ‘properly’ communicate God’s glory. Only he or she is able to know,
love and rejoice – those three activities which God’s glory mainly consists in (Edwards, 1989:441-2).

We have seen that, for Edwards, the perception of things can be true only when they are perceived in their relation to the glory of God. Likewise, he views morality as sound only if, in it, God is ‘the first and the last’ (Edwards, 1989:560). Edwards’ ethical system is laid out in its most complete form in his essay ‘The nature of true virtue’, written to accompany ‘Dissertation concerning the end for which God created the world’. Here he engages critically with ‘writers on morality’ who, while they do not wholly exclude’ God from their theories, still

(...) insist on benevolence to the created system in such a manner as would naturally lead one to suppose they look upon that as by far the most important and essential thing in their scheme. (Edwards, 1989:552-553)

To Edwards, on the other hand, it is unthinkable that any behaviour can be deemed moral if it does not conform to the purpose for which the universe was made. While recognising the goodness of all human loves, he cannot help but think of them as hopelessly constricted when they are not embedded in the love for God. Again writing in aesthetic language, he compares the ‘particular’ love which is not part of the love for God to a few notes that make a harmonious tune and yet stand in discord with a whole piece of music (cf. Edwards 1989:540).

Another image that is often employed by Edwards to distinguish between sound and defective morality is that of space versus confinement (Spohn, 1981). He describes people who exploit others as having a ‘private narrow disposition’. Opposite to these are people with a ‘public spirit’, which testifies to ‘greatness of mind’ and ‘largeness of heart’ (Edwards, 2006:317-8). Moral confinement is ultimately self-confinement, where others are loved only as ‘as appendages and appurtenances to [the] self’. Moral enlargement, on the other hand, is the result of loving others (and the world itself) ‘as of God, or in God, or some way related to him’ (Edwards, 2000:533).

**An application to the question of the purpose of education**

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10 See Carrington (2008) for an overview of the modern ethical theories that Edwards was contending against.
In his fine thesis on Edwards’ educational thought and practice, Stelting (1998:216-217) ends with the question: ‘What, for Edwards, would have been the whole purpose of education?’ He then offers this answer:

> When Edwards mounted the pulpit, or approached the lectern, or sat beneath the tree in the churchyard on Sunday afternoons surrounded by children, it was for one purpose. He intended to create a context within which people might truly, fully, and savingly see God; and that God might enter into them, giving them, by apprehension, a truth they could not otherwise know. He wished to teach people to know God as he knew God. (ibid.)

Stelting’s observation provides us with a helpful point of departure for the application of Edwards’ thought to the question of the purpose of education. I will now make three applications, roughly corresponding to the three themes discussed above. These applications will be focused on school education, and specifically school education that is undertaken from a Christian perspective.

My first application is derived from the first discussed theme, which was termed ‘knowledge as the true perception of relations’. In the execution of this application, the second theme, ‘human beings as creation’s consciousness’, is also involved. The first application can be summarised as follows: Education should provide a context where learners may increasingly perceive the world as God-related, and therefore glory-filled.

Stelting’s choice of the words ‘create a context’ is an apt formulation of what education, as Edwards saw it, is able to achieve. According to Edwards, a true perception of the world is possible only if the world is seen in its relation to the glory of God. Within such perception, the manifold relations in the world can also be understood and appreciated, since it is through beautiful creaturely relations that the glory of God is communicated. Such perception, however, is possible only through the ‘spiritual sense’, through which the glory of God is known as if sensibly perceived.

Although Edwards views the spiritual sense as the direct outcome of the work of the Spirit, he also believes that God, in letting this light into the soul, deals with the human being according to his or her ‘nature’, keeping the ‘natural faculties’ active in the process (Edwards, 1999b:416). Moreover,

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11 It would have become clear by now that Edwards views rightly directed ‘spirituality’, or at least true knowledge and sound morality, as the result of the work of the Holy Spirit. Edwards’ own educational work was consistently informed by his Calvinistic psychology (Blore, 2007:i), according to which only the saving intervention of God can counter sin and its noetic effects (cf. Oliphint, 2003). If this idea sounds offensive today, it is important to realise that many of Edwards’ contemporaries found it equally so (cf. Murray, 1987:xxiv-xxv). It is, however, an idea at home within reformational thought, in which is affirmed that the religious direction of a person extends to all of his or her life. An educational implication of this idea is drawn by Fowler (1990a:34-35) when he delimits Christian schooling to the Christian community, as occurring for ‘children of the covenant’.
the spiritual sense incorporates and enhances the working of the five senses and of the mind as a whole (cf. Edwards, 1999b:415). It follows that education can and should provide a context for spiritual perception, that is, for true perception of the world in its relation to God. Not only should it provide a possible context for the regenerative work of the Spirit in bestowing spiritual perception, but also (and in the case of the school, I would say especially) a context for the increasing exercise of spiritual perception.

Before continuing to a second application, it is worthwhile to pause and consider how a school may provide a context for the increasing perception of the world in its relation to God. I will suggest two complementary ways, based on Edwards’ thought. A first, and perhaps obvious, way is to engage learners’ senses (cf. Stelting, 1998:214-215). In order for the mind to relate ideas, it must first have gained these ideas, through the senses. Schooling, then, should partly consist in arranging sensory encounters through which learners may gain new and meaningful ideas. With ‘meaningful’ ideas I have in mind those that the learner, with his or her own experiences and talents, will be able to truthfully relate to former ideas. In this way, his or her experience of the world can be increasingly enriched.

Yet, sensory encounters do not guarantee that ideas will be truthfully related. Du Plooy et al (1982:53-55)12 remind us that children need to be guided in their natural search for meaning. Edwards would agree. While the world is full of meaning - since it exists to communicate the glory of God - this meaning can only be realised through the world’s human ‘consciousness’. Thus, and this is a second way I wish to suggest, learners need to be helped in ‘interpreting’ their sensory experiences. This help should come from teachers who themselves are able to perceive creation in its relation to the glory of God.

In view of this second way, that is, of helping learners interpret their sensory experiences, Edwards would recommend a dialogic style of education. This can be gathered from a letter written during his employment as missionary educator of Indian children at Stockbridge. He writes of his wish that not only ‘words’, but ‘things’ will be, ‘in a familiar manner, opened to the child’s understanding’. A ‘familiar manner’ entails conversation, with the teacher asking questions and encouraging the child to ‘speak freely’ and ask his own questions ‘for the resolution of his own doubts’ (Edwards, 1998:408). Teaching, then, should venture beyond the transferring of ‘facts’ to the stimulation and truthful answering of questions regarding the unity and the meaning of what is learned. For this, both

12 Du Plooy et al are here referring to the insights of the South African educational theorists C.K. Oberholzer and P. van Zyl.
competency in the teacher and trusting relationships between the teacher and his or her learners are imperative.

I now come to a second application, which is derived from the second theme, ‘human beings as creation’s consciousness’. This application can perhaps be understood as a necessary component of the first application. It can be stated as follows: Education should guide learners to come to know the world as made for them, and themselves as made for it.

The words ‘made for’ may indeed be essential in helping learners experience connection with the world they are getting to know. Since this connection is given by God and has the purpose of making his glory known, one may truly speak of it as a spiritual connection. This connection (or relation) is aptly described by Fowler (1991:18):

We belong to earth; this is our home. At the same time this earthly home is not a place at a distance from God. It is the sphere of our fellowship with God who walks this earth with us, revealing himself throughout our earthly life.

In their relation with the rest of creation, human beings are responsible not only to creation, but ultimately to God. It is a relation in which, according to Edwards, they have the position of ‘consciousness’. This has profound implications for education. The human responsibility towards the world consists neither in controlling (cf. Palmer, 1993:7-8) nor in consuming it (cf. Goheen, 2002:24-25). At the same time, it does not end with a concern for preserving it or ensuring its sustainability. Whereas educational thought that centres on sustainability tends to advocate the development of ‘ecological’ or ‘systems’ thinking through schooling (cf. Sterling, 2001:52; 2008), Edwards would also insist on asking the question: what is the system for? One hears this question indirectly in his response to the supposed allegation that Christian ‘devotion’ makes on less ‘useful’ to the world:

[This is] the same thing as to say that the world was made that the parts of it might be mutually useful to each other; that is, that the world was made to have all the parts of it nicely hanging together, and sweetly harmonising and corresponding: that is that the world might be a nicely contrived world; that is, that the world was nicely contrived for nothing at all! (Edwards, 1994:189-190)

If human beings are indeed the consciousness of creation, as Edwards understood it, then education should develop awareness with learners that they are not free to choose the meaning of the world and of their own place in it. They should continually be reminded that the relation between themselves and the world is there to serve an ultimate purpose. This purpose is that the glory of God may be known. Learners should come to see themselves, moreover, as having a pivotal role in this regard.
My third application pertains to the response that is required of human beings, if they are to be active agents in the communication of the glory of God. This application is derived from the third theme, ‘sound morality as arising from true perception’, and can be stated as follows: Education should promote moral behaviour as a response to true perception.

The idea that behaviour arises from ‘inward thoughts’ or worldviews is criticised by Wolterstorff (2002:82). He is concerned that an ‘inward’ emphasis has led to education that does not impact learners’ daily lives. Edwards, on the other hand, would attribute a lack of impact not to the emphasis on thoughts, but to the emphasis on a type of thought which he terms ‘notional understanding’ (Edwards, 1959:272). As already mentioned above, although notional understanding is necessary, it only impacts behaviour in so far as it results in ‘sensible’ understanding, or the ‘sense of the heart’. When things are known with the ‘sense of the heart’, they are known in ‘their relation to our wills, and affections, and interest’ (Edwards, 1999b:460).

Of course, understanding through the ‘sense of the heart’ can be misguided. After all, our ‘wills, and affections, and interest’ can be, to use Edwards’ language, ‘constricted’. What is required for moral goodness is not only sensible understanding, or perception, but true perception, informed by the sensible understanding of Gods glory. I would suggest that it is through promoting true perception that a school can promote morally sound behaviour. This approach can have the advantage of keeping intact the cognitive focus13 of the school, while fostering connection between knowledge and morality.

My third application can therefore be taken as an extension of the first, with the school’s task of providing a context for true perception now focused on the perception of deliberate human conduct. As Edwards would remind us, a true perception of human actions includes affectively knowing them in their moral goodness or evil. Again, sensory encounters and interpretive discussions may serve to provide a context for such perception. In this case, the encounters and discussions will pertain specifically to deliberate human conduct, come across in study fields such as history, economics, literature and arts. In interpretive discussions of human actions, whether individual or societal, the

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13 From a reformational philosophical point of view, with its emphasis on sphere sovereignty, it is important to acknowledge that the role (also the educational role) of the school is limited. It is normally agreed that the school’s primary role, which it is especially equipped for, is the development of the cognitive or intellectual aspect of human functioning (cf. Du Plooy et al, 1982:149). Fowler (1987:13), for instance, specifies that formal education should contribute to growth towards fullness of humanity through developing understanding of how creation functions [own emphasis]. Du Plooy et al (1982:149-150) and Fowler (1990b:75-80) would agree, however, that the school should promote cognitive development in ways that will, at the same time, involve and enhance other aspects of human functioning. Based on Edwards’ work, it might be suggested that this can be done through helping learners to know things ‘sensibly’ and not only ‘notionally’ – that is, through helping them know things in ways that involve the affections.
teacher should guide learners to come to know these actions not merely as ‘facts’, but as responses to the God who has made humans to be the primary communicators of his glory. All actions have a moral aspect to them, which should help determine whether they can be perceived as ‘beautiful’ or ‘deformed’ and, consequently, as worthy or unworthy of imitation.

A preliminary evaluation from a reformational philosophical perspective

It lies outside the scope of this article to give a comprehensive evaluation of Edwards’ philosophical thought from a reformational philosophical point of view. For the present I leave largely untouched, for instance, the possible concern that Edwards was guilty of ‘synthesis thinking’, incorporating biblical concepts with ideas from non-biblical origins such as Platonism and Scottish realism (cf. Runner, 1970:82). My main reason for refraining from such an evaluation is the manifest lack of scholarly consensus regarding this issue. To what extent Edwards was in fact influenced by classical and modern philosophies, and which philosophies influenced him most strongly, are still matters of debate (Freeberg, 1999:202-205; Louie, 2007:62-63).

For the present, then, two matters will briefly be considered, as they pertain especially to a biblical understanding of ‘spirituality’ and its place in education.

Firstly, there is the question of whether Edwards’ concept of the ‘spiritual sense’ can further a biblical understanding of spirituality and of its place in education. It is clear that, for Edwards, the ‘spiritual sense’ is present solely where there is true faith. However, if the ‘spiritual sense’ amounts to a ‘sixth sense’ (cf. Lane, 2004), there is reason for caution. We are reminded by reformational authors (see for instance Wolters (2005:71-72) that salvation and regeneration do not entail the addition of a ‘spiritual’ dimension as a donum superadditum. Rather, in salvation and regeneration, the spiritual (or religious) dimension, which is already present in and central to every human being’s life, is restored and redirected. One may speak also of a redirection of the ‘heart’ as the religious centre of the self which directs all aspects of life.

Edwards arguably sees too much discontinuity between life before and life after regeneration (Ortlund, 2014:48). He describes the work of the Spirit in regeneration as ‘entirely above nature, altogether of a different kind that men find within themselves by nature’ (Edwards, 1959:205). Against this, it should be emphasised that regeneration is restorative. The ‘sense of the heart’ after regeneration can only be new in the sense that it is a ‘restored’ sense.

14 Rooy (1966:302) argues that Runner is mistaken in associating Edwards’ thought with Platonism. He suggests that Edwards’ conceptions of the relation, and even the similarities, between God and humankind is rooted in his understanding of redemption in Christ (ibid). For a similar argument, see Schultz (2006:254).
This is not to deny that we can learn from Edwards’ conception of the spiritual sense as essential to regenerated (restored) human life. If Stelting (1998:217) is right, Edwards’ view of the spiritual sense can encourage the creation of educational ‘contexts’ for the increasing perception of the glory of God. A school, as remarked often by reformational philosophers, needs not take up the role of a family or a church in order to be ‘spiritual’ in its purpose. It needs not adopt the aim of transferring doctrines of faith. It should, however, serve as a place where learners can increasingly come to know creation as the ongoing display of the glory of God. In a previous section I have given indications as to how this might be achieved.

If Edwards’ concept of the spiritual sense is, as I have argued, conducive to a reformational understanding of the purpose of education (that is, provided the excessive discontinuity between ‘natural’ and ‘renewed’ life is adjusted), it still remains to be determined how conducive Edwards’ view of the object of the spiritual sense might be. This is my second point of evaluation. The object of the spiritual sense is the glory of God or, as Edwards often puts it, God’s beauty. This glory or beauty is harmoniously communicated through Scripture and through creation. The communication of it reaches its culmination in God’s redemption of the world through Jesus Christ (cf. Gibson, 2008:65-75).

We can learn from Edwards as he emphasises a truth which even reformational philosophy, with its emphasis on the creation order and creatioinal laws, does not always fully account for. This truth is that creation is God’s ongoing communication of his glory. While learners should be taught to understand the ‘particular laws of nature with respect to particular creatures’ (Edwards 2004:205), they should also be taught to trace how these laws serve the ultimate purpose for which the world was made, which is that God’s glory may be communicated. Yet, while we can learn from Edwards’ teleological emphasis on creation, we should reject the idealist and world-negating directions in which this emphasis often led him (cf. Rupp, 1969). If creation can be understood as the ‘communication’ of God’s glory, then this communication should be understood as encompassing all aspects of created reality in their own significant ways. This will withhold us from elevating certain aspects of creation above others and, instead, embolden us to look for the glory of God as he displays it in all of creation.

In the same way, the human role of being creation’s ‘consciousness’ will also be seen as embracing all aspects. Van der Stelt (2005:55) points us in this direction when he calls for a more comprehensive and more biblical understanding of ‘knowing’, as ‘being aware of, attuned to, looking for, relying upon, responding to, rejoicing in, and giving expression to God’s will for all created reality’. In the work of Edwards, such a comprehensive understanding of knowledge is sometimes implied, but not fully developed.
Conclusion

In this article, three philosophical themes in the thought of Jonathan Edwards were explored and applied to the question of the purpose of education. The present search for spiritual ‘connection’ in education is related to the question of what the purpose of education should be. It was suggested that Edwards’ thought may be conducive to a reformational view of the purpose of school education in which the contemporary search for spiritual connection is accounted for.

It was argued that Edwards’ (worldviewish and ontological) understanding of the relation between God and creation has largely shaped his ideas in the areas of epistemology, anthropology and ethics. Edwards’ understanding of creation as an act of God, whereby he purposefully communicates his glory, is complemented by his view of knowledge as the true perception of relations, of human beings as creation’s consciousness, and of moral goodness as arising from true perception.

Three main applications were drawn from Edwards’ philosophical thought to the question of the purpose of education. The first of these is that education should provide a context where learners may increasingly perceive the world as God-related, and therefore glory-filled. For this it is necessary that education will serve as a context in which meaningful sensory encounters are accompanied by dialogical guidance.

The second application is that education should guide learners to come to know the world as made for them, and themselves as made for it. They should be guided in knowing and enjoying the relation between themselves and the rest of creation. At the same time, they should be guided to come to know and enjoy this relation as one which is intended for the communication of God’s glory.

The third and final application is that education should promote sound morality as a response to true perception. Learners should be guided in perceiving human actions as responses to the God who has made humans to be the primary communicators of his glory. By learning to perceive human actions in this way, learners may themselves grow in moral goodness.

While not without its problems – some of which were dealt with in this article – Edwards’ philosophical thought may be fruitful soil for the furthering of a reformational understanding of the purpose of education. This may be especially through providing ways of conceptualising various types of ‘connection’ in school education. These include, for example, connection between knowledge and affection, connection between the learner and the world, and connection between knowledge and morality. Types of connection such as these are today pursued under the banner of ‘spirituality’. Spirituality, or spiritual ‘connection’, should be comprehended within the framework of the relation between God and his creation.
References


Palmer, P.J., 1993, To know as we are known: Education as a spiritual journey, Harper San Francisco, San Francisco.


Van der Stelt, J.C., 2005, 'Faculty psychology' and theology, in J.H. Kok (ed.), *Ways of knowing in concert*, 45-59, Dordt College Press, Sioux Center, IA.


LIMITATIONS, CONTRIBUTION AND RECOMMENDATIONS

Limitations of the study

There were some limitations to the present study that were unavoidable, given the limited scope and length of the research article. One such limitation was that, in focusing on Edwards' own thought, only slight attention was given to the historical and philosophical backgrounds against which his ideas took shape.

A further limitation was that the views of other Christian (and even reformational) authors regarding the purpose of education were not thoroughly taken into account. Likewise, other Christian (and reformational) conceptions of spirituality and of the relation between God and creation were not dealt with.

Lastly, the evaluation of Edwards' thought from a reformational philosophical point of view could only be preliminary. Many issues still remain to be investigated, such as Edwards' possible overemphasis on relationality and the extent to which he synthesised biblical with non-biblical ideas.

Contribution of the study

Edwards' philosophical thought has received much scholarly enquiry during the past century. His educational thought and work have also come under the attention of a few authors, such as Stelting (1998) and Minkema (2011). The aim of the present study was to show the relevance of Edwards' thought for a contemporary reformational conception of the purpose of education. This was done through focusing on three themes in his philosophy and applying them to the question of the purpose of education, specifically with regards to the search for spiritual 'connection' in school education.

Recommendations for further research

I will like to recommend further research in the following areas:

- Edwards' thought could be evaluated more thoroughly, from a reformational philosophical point of view.

- The question of the purpose of education, with specific regards to the contemporary search for spirituality in education, could be researched with reference to other Christian and reformational authors.
APPENDIX

Prescriptions for research articles submitted to *In die Skriflig*/In *Luce Verbi*

The following stipulations for the submission of articles to *In die Skriflig*/In *Luce Verbi* are given on the publication’s website (http://www.inluceverbi.org.za/index.php/skriflig/pages/view/format):

**General elements**

Quotations: Use single quotation marks for quotations. For quotations within quotations, use double quotation marks. Quotations of more than 30 words are to be indented. Do not use quotation marks for indented quotations unless it is direct speech (e.g. interviewee responses).

En dashes and hyphens: Use an en dash (i.e. extended hyphen that can be found in the Insert box under Symbols in Microsoft Word) in ranges of numbers and dates. Use hyphens only for words that are hyphenated.

Dates: Format dates as ‘02 October 2006’, except at the beginning of sentences where numerals and dates should either be spelt out or the sentence should be rearranged.

Percentage: The per cent symbol (%) is used in conjunction with all numbers (e.g. 12%). Numbers that have been written out will appear with ‘per cent’ (e.g. five per cent). ‘Percentage’ is used in a general sense.

Numbers: Numbers from one to nine must be written out. Numbers from 10 onwards, must be used as numerals, except at the beginning of a sentence.

Spacing and punctuation: There should be one space (and not two) between sentences; one space before unit terms (e.g. 5 kg, 5 cm, 5 mmol, 5 days, 5 °C, etc.), but no space before the percentage symbol (%). Thousands and millions are marked with a space and not a comma (e.g. 1000, 1 000 000). Ranges are expressed with an extended hyphen (i.e. en dash), not with a short hyphen (e.g. 1990–2000).

Units: The use of units should conform to the SI convention and be abbreviated accordingly. Metric units and their international symbols are used throughout, as in the decimal point (not the decimal comma), and the 24-hour clock.
Foreign language: Foreign language words should be italicised, unless these words are part of normal usage. Consult the Oxford English Dictionary if in doubt.

Acronyms: If a phrase with an established acronym or abbreviation is used and appears more than five times in your article, please include the acronym or abbreviation in brackets after first mention of the phrase, and then use the acronym or abbreviation only. Please note that you should not define acronyms or abbreviations in any of your headings. If either has been used in your abstract, you need to define them again on their first usage in the main text.

**Sensitive and political terms**

Race and ethnicity: Try to avoid terms such as 'Blacks' and 'Whites' (please note the use of uppercase letters); use instead ‘Black people’, ‘White people’, etc. 'Caucasian', 'Mongoloid', 'Negroid', etc. are generally to be avoided except in human population studies. 'Mixed race' is preferable to 'half-caste' or 'Coloured'.

Disabilities: Avoid using ‘the disabled’, ‘the handicapped’, and instead use ‘people with disabilities’ not ‘the disabled’ or ‘people with learning difficulties’, not 'mentally handicapped'.

Disease

- Avoid health-determined categorisation.
  - Use ‘people with diabetes’; not ‘diabetics’.
  - Use ‘people with cancer’; not ‘cancer sufferers’.
  - Use ‘sexually transmitted infection (STI)’ and not ‘sexually transmitted disease (STD)’.
- Avoid phrasing that dehumanises a patient. Many authors use case (instance of a disease) when they mean patient (i.e. the person or individual who is ill with the (disease).

AIDS

- Ensure that ‘AIDS’ is used for the disease and ‘HIV’ for the virus, e.g. do not use ‘AIDS carrier’, ‘AIDS positive’, ‘AIDS virus’ or ‘catching AIDS or HIV/AIDS’ (avoid using the solidus here).
- ‘AIDS sufferer/victim’ is inappropriate; use ‘people with AIDS’.
- Refer to ‘people who practise high-risk activities’ and not ‘high-risk groups’.
- The expression ‘full-blown AIDS’ is unnecessary if the correct distinction has been made between HIV and AIDS.
Male versus Female: ‘Male’ and ‘female’ are *adjectives*, so be careful to use them as such (i.e. a *male* patient and a *female* frog, but a 35-year-old *man*, a *French woman* and a group of 25 *men* and 35 *women*).

Sexuality: Avoid the terms ‘*homosexual activities*’ (if achievable within the manuscript’s context, specify which activity is being referred to, especially when dealing with medical research.) Avoid using ‘*homosexuals*’ (specify homosexual men or homosexual women).

Gender: Use gender neutral nouns. Avoid the use of ‘man’ if not specifically referring to men; for example:

- for ‘man’ use ‘humans’
- for ‘man-kind’ use ‘the human race’
- for ‘man-power’ use ‘workforce’
- for ‘man-made fibre’ use ‘synthetic fibre’

‘He/she’, ‘him/her’ and ‘his/hers’: For ‘he/she’, ‘him/her’ and ‘his/hers’ rather use ‘he or she’, ‘her or him’, ‘his or hers’ (without a solidus) or change to plural ‘they’. Use inclusive pronouns: use ‘he or she’, or rephrase the sentence (rephrasing to the plural form often works):

- ✗ … *Any observer* of changes in publishing technology will perceive that *he* has need of…
- ✓ … *Observers* of… will perceive that *they* have…

Beware of referring to people with stereotypical pronouns (e.g. ‘the doctor treated *his* patient’; ‘the secretary tidied *her* desk’).

Geography

- The terms *Third World, poor countries and underdeveloped countries* should be avoided.
- *Developing or non-developed country/society* is better, but it is best to specify countries or regions instead.
- *Western society and Western World* should only be used in relation to geography; otherwise, use *developed world/society* or, even better, specify the countries themselves or the region.