

# Erratum: Theology, philosophy of biology and virology: An interdisciplinary conversation in the time of COVID-19

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In the published article, Venter, R., 2021, 'Theology, philosophy of biology and virology: An interdisciplinary conversation in the time of COVID-19', *Verbum et Ecclesia* 42(2), a2354. <https://doi.org/10.4102/ve.v42i2.2354>, on page 1 the following paragraph is updated as it was incorrectly formulated:

**The original incorrect wording:**

Two events have prompted this research: the pandemic and the celebration of the theologian Wentzel van Huyssteen's eighteenth birthday. Like no other scholar from South Africa he raised consciousness about the faith-science dialogue, and his intellectual accomplishments on the nature of rationality and the need for interdisciplinarity earned him well-deserved international recognition. With this enquiry about COVID-19, science and theology, and interdisciplinary, I would like to convey my own scholarly gratitude to him. By embracing his concerns and applying them to new exigencies, we express the enduring significance of his academic work.

**The revised and updated wording:**

Two events have prompted this research: the pandemic and the celebration of the theologian Wentzel van Huyssteen's eightieth birthday. Like no other scholar from South Africa he raised consciousness about the faith-science dialogue, and his intellectual accomplishments on the nature of rationality and the need for interdisciplinarity earned him well-deserved international recognition. With this enquiry about COVID-19, science and theology, and interdisciplinary, I would like to convey my own scholarly gratitude to him. By embracing his concerns and applying them to new exigencies, we express the enduring significance of his academic work.

In addition, the ORCID of Rian Venter was given incorrectly as <https://orcid.org/0000-0002-8997-6696>. The correct ORCID should be <https://orcid.org/0000-0002-1054-4007> in the 'Author' section.

The publisher apologises for this error. The correction does not change the study's findings of significance or overall interpretation of the study's results or the scientific conclusions of the article in any way.

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# Theology, philosophy of biology and virology: An interdisciplinary conversation in the time of COVID-19

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The coronavirus disease 2019 (COVID-19) moment has stimulated multiple intellectual attempts to make sense of the pandemic. The complexity of the challenge obviously requires an interdisciplinary approach. The specific problem explored in the article is the question whether a dialogue between Virology and Philosophy of Biology on the one hand and theology on the other may open new possibilities for understanding the very nature of reality. The point of departure is that the interdisciplinary conversation is a practice of negotiation and not of addition. New developments in Virology are narrated and the conventional association of viruses as mere pathogens is countered with an appreciation of their age, abundance and evolutionary impact. The discipline of Philosophy of Biology is included in the conversation to underline the metaphysical consequences of thinking about viruses. In the theology of creation, interpretations which resist equating viruses merely as natural evil are narrated. The central proposal of the article, transpiring from the conversation, identifies the notion of equivocity as fundamental description of reality. This ontological insight may do justice to contemporary Virology and to the sense of Mystery in theology and the Christian doctrine of creation.

**Intradisciplinary and/or interdisciplinary implications:** The article is an explicit attempt to engage two disciplines of the natural science – Virology and Philosophy of Biology, and theology. Contemporary developments in the state of scholarship of these disciplines are mentioned. A basis in ontology is proposed for the conversation, and a central insight transpiring from the disciplines is suggested – that of equivocity. An interdisciplinary conversation may give rise to a more nuanced insight into the nature of reality.

**Keywords:** COVID-19; creation; evil; equivocity; interdisciplinarity; ontology; pandemic; philosophy of biology; virology.

## Introduction

Crises have the surprising potential of generating new knowledge amidst disruption and suffering. This may also apply to the coronavirus disease 2019 (COVID-19) pandemic. We learn about the need for human touch, the susceptibility of people for post-truths, the scope of injustice and the fault-lines in societies, and about the possibility of new types of vaccines. Inescapably, theologians are prompted to enquire after their own discipline: Is this also the occasion for expanding their knowledge? This article intends to venture into this fraught terrain and ask whether the crisis may stimulate new thinking. One specific avenue has been selected: an interdisciplinary conversation between Philosophy of Biology and Virology on the one hand and Systematic Theology on the other. This angle highlights two fundamental convictions: a complex phenomenon like the COVID-19 pandemic renders the input of multiple disciplines an imperative, and reflection should move beyond the 'war' on the virus and therapies for those affected; it should reflect on *the nature of reality* as such. The question to be addressed is this: Could a crisis like this one advance knowledge about the *ontic structure of life* by an interdisciplinary conversation between theology and science?

Two events have prompted this research: the pandemic and the celebration of the theologian Wentzel van Huyssteen's eighteenth birthday. Like no other scholar from South Africa he raised consciousness about the faith-science dialogue, and his intellectual accomplishments on the nature of rationality and the need for interdisciplinarity earned him well-deserved international recognition. With this enquiry about COVID-19, science and theology, and interdisciplinary, I would like to convey my own scholarly gratitude to him. By embracing his concerns and applying them to new exigencies, we express the enduring significance of his academic work.

**Note:** Special Collection: Festschrift for Wentzel van Huyssteen.

## Pandemic – New horizon for theology

Engaging the pandemic theologically expresses an intellectual posture inherent to the Christian faith – to interact with the external environment. Since the early Apologists there has been an attempt to enter into conversation with a wider world of thinking. One can even give an account of the various shapes this has assumed over a period of 2000 years. For example, the encounters with Greek philosophy, later with Aristotelianism, with early Renaissance humanism, with emerging modernism in especially the 19th century are well-known. Since the mid-twentieth century this interaction with society has taken a pronounced historical turn, meaning concrete conditions have been considered as challenges for the Christian faith and theology. For example, the poor has become a critical optic for doing theology. Increasingly, the multiple forms of alterity – race, gender, sexual orientation, disability – have determined the manner of doing theology. Very few theologians, if any, would contest the inescapable contextual nature of theology; theology is always ‘situated theology’ (see Bergmann & Vähäkangas 2021 for a recent discussion of this). What is striking from the various discourses is how specific and how innovative contextual constructive efforts have become. The growing ecological consciousness has stimulated attempts to do theology, for example, in light of climate-change. The realisation of a new epoch, the anthropocene, has given rise to new orientations in theology.

Maybe a lurking sense of pending doom has been crystallising for some time. In 2017, the Scandinavian theologians Gregersen and Henriksen (2017:331) advocated ‘theologies of tragedy and disaster’, referring to ‘endangered selves’. And then on 11 March 2020, the World Health Organization declared a pandemic. At the time of writing this<sup>1</sup>, 4 152 558 people have already died. ‘Pandemic theology’ (see e.g. Messer 2020:3) has become the theological task. One cannot miss how major thinkers grapple with the crisis from their respective disciplinary fields. For example, Brueggemann (2020) from the Old Testament, Wright (2020) from the New Testament, and Lévy (2020) from philosophy. Disciplinary resources have been mustered to make sense of COVID-19.

Something similar has been happening in South Africa. Dynamic and wide-ranging scholarly reflection has been taking place. Stock-taking of all the endeavours can obviously not be undertaken here; this would warrant separate studies. Only a few can be mentioned. Theologians like Meylahn (2020) and Pityana (2020) issued swiftly opinion-articles on what COVID-19 may entail for the faith, focusing on what it means to be human amidst a pandemic and what it may imply for the church. A philosopher like Olivier (2020) raised the question about humanity’s relation to nature. The intellectual reflex by the Reddy (2020) signals a significant intuition: the pandemic requires multidisciplinary interaction. Under the rubric *More eyes on Covid*, a variety of

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well-known intellectuals have submitted opinion-pieces representing the humanities and the social sciences. A complex occurrence cannot be dealt with mono-disciplinarily; it necessitates the entire knowledge enterprise. What I could not find in the various electronic databanks is an intentional interdisciplinary exploration, seeking the implications of the COVID-19 pandemic for an understanding of reality as such. This is then the contribution of this article.

Attempts at theologising the pandemic can obviously pursue a variety of trajectories, some of which are fairly straightforward, like questioning the hermeneutical use of the Bible (see e.g. Tolmie & Venter 2021). To explore anthropological pathways, like trauma, or ecclesiological ones, like the role of sacraments in a techno-centric moment, or social ethical questions, like justice, are relevant, but fairly predictable ones. The very notion of theologising a pandemic warrants scrutiny. More is at stake than a mere application of biblical analogies or theological motifs to a crisis. The cognitive matrix of the Christian faith and its viability for making sense, for contributing to the public reservoir of insights should be investigated. One element of such a matrix is the Christian understanding of creation, especially about its assumed goodness and the existence of evil as explanation for suffering. This is strictly an ontological concern, and will be addressed in this contribution. The existence of the phenomenon of viruses in the biosphere requires an exploration of this nature.

## Interdisciplinarity – Re-affirmation of the imperative

The complexity of the COVID-19 pandemic has never been contested and one has also come across scholars recommending explicitly interdisciplinary collaboration. For example, Moradian et al. (2020:2ff.) stress that the public health crisis requires teams with varying specialties to work together to achieve an overall objective. They discuss various natural sciences, but also social and economical sciences. The theologian Mpofu (2020:3) employs the notion of ‘transversal rationality’ to create new meanings for a missional church in light of liturgical practices and new technologies during a time of COVID-disruption.

The background to the insistence on interdisciplinarity is well-known. The history of knowledge formation conveys clear trends: modern disciplinary differentiation towards the end of the 18th century intensified specialisation, which led increasingly to self-referentiality and fragmentation. This in turn created dissatisfaction which motivated a quest for interdisciplinarity since the 1970s (see Weingart 2010:5f., 12). Schüssler Fiorenza (2005:203) points out that disciplinary differentiation and specialisation should be understood as part of the larger evolution and differentiation of societies as such. The growth of more complex social problems lies at the basis of the realisation that disciplinary retreat should be resisted and that new configurations of knowledge has become a matter of urgency. These three – society, problems

and complexity – should be thought together. Some distinction is, however, necessary here. The scholar of interdisciplinary studies, Klein (2010:22f.) points to the ‘major faultline’ in the discourse: the one between an instrumental and a critical approach. In interdisciplinarity, it is not about a mere service to market and national needs, but about the interrogation and transformation of knowledge structures. This is pertinent to this reflection of mine, as will become clear.

This brings the questions about the precise nature of interdisciplinary endeavour into clearer view.

It is not about addition, but about negotiation. Mol and Hardon (2020:1–3) are emphatic about this: interdisciplinarity does not accord with the metaphor of a jigsaw puzzle in which disciplines merely add pieces; it is rather about ‘negotiating the juxtaposition of its potentially contrasting versions’. The underlying epistemology is constructivist and conflictual (see Klein 2005:10). Often interdisciplinarity is equated with ‘integration’; for example, saying that interdisciplinarity should be done ‘in order to provide an integrated view of a complex reality’ (Lovin et al. 2017:xvii) should be uttered with caution, and with qualification. It is just too idealistic. This is especially acutely pertinent in the faith-science dialogue. To integrate transcendence (let alone referring to a personal deity) with a naturalistic paradigm is basically incommensurate. Schüssler Fiorenza (2005:215), writing with a sense of the difficulty of the project, explicitly rejects ‘a nostalgia for a lost wholeness or a lost unified vision of knowledge’, but still argues for a discursive space for theology by referring to the boundaries of knowledge, and the embeddedness of knowledge within questions of the meaning of life. In the Christian tradition it is about raising the reality of mystery, who is named ‘God’. By placing the dialogue with Virology in the context of Philosophy of Biology, an attempt has been made to clear a space for a deeper questioning, a trajectory which probes fundamental meanings. But one remains cautious about the inherent irreconcilability with disciplines built on naturalism. The danger of becoming a ‘scholar-dabbler’ (Ghiloni 2013:14) is all too real.

Despite the sobering realisation that interdisciplinary conversations are difficult, the hope remains that some fruit may be born from the venture and that is inevitable. Writing about the future of interdisciplinarity in the revised Oxford Handbook, the editor Frodeman (2017:7) interestingly identifies the rhetorical dimension thereof: how to relate the efforts to the needs of the community. He views this approach to knowledge as the bridge between academic sophistry and the rest of society. Interdisciplinarity entails ‘an implicit philosophy of knowledge...a general reflection on whether and to what degree knowledge can help us achieve the perennial goal of living the good life’ (Frodeman 2017:8). This focus on the well-being of society is a crucial reminder to the ultimate aim of this kind of research. The dialogue between theology and science intends a deeper understanding of life.

In a level-headed article, the scholars Deane-Drummond et al. (2013:33), considering the conversation with evolutionary biology, talk about ‘a clearer picture of humans’ place in nature... to figure out how to live together in a global culture sustained by a single ecosystem’. In a condition of pandemia, an engagement of theology with disciplines like Philosophy of Biology and Virology may contribute to such hopes. Interdisciplinary theology is fundamentally *public* theology as Van Huyssteen (2011:95) also believes.

## Philosophy of Biology and Virology – Some perspectives

Since the pre-Socratic thinkers, questions of philosophy and the nature of the universe have been intertwined. Some philosophers even made scientific contributions. Towards the end of the 18th century the proliferation of academic disciplines and increased specialisation resulted in the parting of ways between philosophy and natural sciences. Interestingly, the pendulum has started to move back towards some form of rapprochement with the establishment of philosophy of science. As a sub-branch of this discipline, Philosophy of Biology emerged in the 1970s. The publication of John Hull’s work *Philosophy of Biological Science* in 1974 is a noteworthy milestone in this regard (see Odenbaugh & Griffiths 2020).

Three factors contributed to its emergence (Okasha 2019:2): a reaction to a concentration on physics in the philosophy of science, conceptual problems in biology itself and the turn to naturalistic explanation in philosophy itself. These correspond also broadly with the tasks of the new study field: to discuss general philosophical issues in the context of biology; to clarify conceptual dilemmas and to address questions naturalistically (Odenbaugh & Griffiths 2020). Typical questions which receive attention in the discourses focus on evolution, adaptation, species, genes and more recently ecology.

What is sadly underrepresented in Philosophy of Biology is the study of viruses and immunity. In a seminal article, Pradue, Kostyrka and Dupré (2016) also point this hiatus out. They not only attempt at redressing this neglect, but discuss matters that have become exceedingly relevant in the COVID-19 pandemic. They focus on six issues: the definition of viruses, the individuality and diachronic identity of a virus, the possibility of classifying them in species, the question whether viruses are living, and whether they are organisms, and the role of viruses in ecology and evolution. Their conclusion is important for this reflection:

Thus, the study of viruses raises fundamental issues, having to do with the definition of life, biological individuality and identity, the notion of organism, and the ontology of living things or processes. (Pradue et al. 2016:60)

For the purpose of this article only some pertinent aspects of the study of viruses can be highlighted. Since the work of A. Mayer in 1986 on tobacco plant disease, the coining of the

term 'virus' by M Beijerinck in 1998 and the invention of the electron microscope in 1939, the study of viruses has developed with an intensity (see Crawford 2018:4f.). Despite their overwhelming abundance in the world of microbes, these particles, consisting of genetic material and a protein coat, are not included in the tree of life alongside Archaea, Bacteria and Eukarya as they are considered as not alive and as 'obligate parasites' which are inert until they infect a living cell (Crawford 2018:5–7, 13f.). However, the virosphere in its immense size, diversity and complexity, is increasingly appreciated for its importance in the stability of ecosystems (Crawford 2018:20). More is at stake with viruses than bad news wrapped up in protein (Medawar)! Viruses are considered 'the preeminent font of genetic diversity' as they have played critical roles in triggering major evolutionary transitions (Quammen 2021:48, 55). Precisely the mixing of genomes, the depositing of new genetic material in their genomes, is crucial in the evolutionary process (Quammen 2021:48, 55). It is calculated that, for example, up to 8% of the human genome consist of the deoxyribonucleic acid (DNA) of retroviruses (Quammen 2021:62). In short, to associate viruses only with 'bad' is only part of the biological narrative; there is also a massive 'good' at play here. Viruses are not merely pathogens. It is precisely this *ambiguity* – the threat to life and the stimulus to life – which opens ontological possibilities.

The developments in Virology and the shifts in understanding its place is significant and have inevitable philosophical implications. A number of new emphases intersect here: questions about the nature of viruses are inescapably linked to the larger questions about the living world as such. The work of the scholar Patrick Forterre is exceedingly important here. He points to two related insights: a virus should not be confused with the particle (the virion) and viruses should not be ignored in the narrative of evolutionary biology. His alternative is the notion of 'virocell', that is, the cellular step of the viral cycle. The wholeness of a virus includes its presence in a cell. This renders viruses cellular organisms as part of their reproductive cycle. This counters with the traditional understanding of the virus as not living (Forterre 2017:76–78). Furthermore, he emphasises the fact that viruses can be seen as the 'cradle of new genes', thereby stating that 'the coevolution of viruses and cells...most likely shaped the history of life more than any other evolutionary force' (Forterre 2017:77).

This refocussing from the virion to the virocell, from a static entity to activity between virus and host, obviously entails a turn to *process* and to *relationship*. The implications of this are vast. Nothing but the 'metaphysical character of living beings' (Ferner & Pradue 2018:1) transpires here: organisms are processes rather than 'things'. Sfetcu (2020:3), weighing in on this debate whether one should think in terms of 'thing' or 'process', correctly talks about 'virus ontology'. It is exactly here that the critical interface between the studies of Philosophy of Biology and Virology emerges. In an excellent article, Holdrege (2020) discusses this. At stake is a move beyond the 'war metaphor' for understanding viruses to a

more 'ecological view' (Holdrege 2020:4). Viruses play a decisive role in the web of life. Between virus and the host organism is mutual interaction; there is a fluidity in the exchanges and transformations taking place; there are connectedness and interweaving relatedness (Holdrege 2020:6). Virology has clearly moved beyond an understanding of viruses as mere pathogens; they should be placed in the context of the development of life, of genetic diversity and the equilibrium of nature. The *mutuality* between *cells and viruses* is a crucial insight. Viruses become pathogens when things go wrong; when natural hosts are lost because of changes in the environment and well-balanced equilibrium is disturbed (Moeling 2013:1844). This can be caused by many factors, amongst them ethical questionable behaviour. The volume of essays on COVID-19 – *Pandemic, ecology and theology* (ed. Hampton 2021), with contributions by renowned scholars like C Keller and J Milbank – identifies accurately what is at stake – broken relationship with the natural world.

Holdrege (2020:7) moves from ontology to ethics when asking about the 'larger questions': the facets of virus-host interactions in disease, the characteristics of earth ecology and social relations that come to expression in a pandemic, and the underlying imbalances in organisms and in society which provide conditions for a pandemic. These questions take thinking into the terrain of philosophy.

## Doctrine of creation – Some perspectives

To identify theology as a conversation partner with Virology and Philosophy of Biology would require some specification, a narrowing of the broad scope of this field of study. My proposal here is that it should be the Christian doctrine of creation, or put differently, the vision of reality. To theologise a crisis, a challenge like COVID-19 and viruses, could understandably assume divergent strategies. One intuition may be an attempt to look for analogies with Biblical experiences; another to explore the meaning of motifs of the overall matrix Christian faith, like bodiliness, cruciform vulnerability, or eschatological healing. One finds in the literature examples of all of these, and especially treatments of various theodicy proposals. The presence and action of the divine amidst such suffering remains a perennial question to faith.

Turning to the doctrine of creation, one is obviously confronted by the question what is at stake. In the standard and well-known textbooks, for example, Berkhof (1993:151–179) and Migliore (2014:96–120), the typical Christian notions appear – the Triune God as creator, creation ex nihilo, the creation as good, as purposeful, and an appreciation of ecology and science. Recently, Kärkkäinen (2019:109f.) refers to 'a new vision for the Christian theology of creation', adding dialogue with the various world-religions. Some of the latest considerations, especially in light of the pandemic, acknowledge the need for further probing of traditional views. Brett and Goroncy (2020:348, 350), for example, also

appreciate the centrality of the creation doctrine, and suggest that the created order 'cannot be described as an unqualified good', and that 'the tragic' should be accorded greater space in the Christian vision. A re-visiting of the doctrine has been overdue in light of scientific developments of the last century and a half. Most theologians realise this and reconstructions are being undertaken. Two perspectives can be highlighted which are pertinent.

The world has not been created as a fixed entity; it should be interpreted as a 'project'. This has been strongly emphasised by scholars like Jenson (1999:14) and Gunton (1997:142). The world is not a thing, but *a history*. This has obviously vast implications. It allows for thinking creation as open and dynamic, for the appreciation of process and emergence, of unity between creation and providence and creation and redemption. The groundwork for intersubjectivity, for joint human and divine agency, is also laid by this. Ontology and ethics become simultaneously interwoven – being and becoming are intimately linked. One is compelled to start thinking in dramatic ways about reality.

If this insight is coupled with *contingency*, even a greater reservoir of meaning is generated. No theologian has pointed to this structural feature of reality more persuasively than Torrance (see e.g. 1979). This 'fundamental factor in the basic structure ...of order in the universe' (Torrance 1979:330) points to an openness in nature, beyond sheer mechanistic necessity and chaotic randomness and chance, and encompasses a certain rationality. For Torrance as theologian this 'openness of nature' bespeaks God and the 'endless possibilities of the Creator' (Torrance 1979:334). The associated notions which emerge from contingency, like indeterminacy and relatedness, should be taken note of. Also crucial in Torrance's treatment are the scientific ramifications. Contingency permits also a variety of theoretical explanations in science.

In a dialogue with scientific disciplines these elements, briefly mentioned, establish a basis for a conversation. In theology, however, the discourse continues with a sensibility which introduces a certain 'thickness' in the interpretation, that of *evil*. In the reflection resulting from the COVID-19 pandemic several thinkers also struggle with this and a few excellent articles have been published.

In an early attempt at providing a theological account of the COVID-19 pandemic, the German theologian Thomas (2020:1f.) formulated the central question about how the viral infection relates to the goodness of creation. In a short, but carefully nuanced treatment, he situates this in the biblical tradition of overcoming of chaos. It is noteworthy that he does this under the rubric of 'creation' and not evil as such. In a more recent and good discussion, Schilling (2020:19), a virologist and theologian herself, contextualises the problematic squarely in Christian discourse on evil. Her approach and views should be carefully studied. At stake is obviously the long tradition of distinguishing between moral and natural evil. In light of the immense adverse impact the

pandemic has an automatic reflex is to label the virus 'evil'. Although she does not mention the inevitability of an interdisciplinary take on the question, her approach is precisely that. What has been described earlier in this article, forms the basis of her argument. She emphasises the interplay between virus and host, stating (Schilling 2020:24): 'The pathogenicity of a virus is determined by both the virus and the host immune system'. She points to the evolutionary impact of viruses and their contribution to genetic novelty. Her answer to the question about evil, moves in various directions. She dismisses a simplistic association of viruses with evil, and then, and this is crucial for her, she focuses on the anthropocentric interpretation of viruses like severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), that is, when something causes suffering to humans it is labelled 'evil' (Schilling 2020:25ff.). Her 'virocentric' interpretation of evil in the end crystallises in a plea for recognition of human subjective interpretation, of human limitations and for differentiated speaking. This is simultaneously fruitful, but also disappointing.

The work by Schilling should be given due credit; however, the level of engagement is strictly epistemological – that is, how humans interpret reality and events which cause suffering and disruption. Although this hermeneutical dimension is ever-present in all sense-making one question may be raised about another level of entry. *Ontology* situates the character of phenomena in themselves regardless of connotation and association. Viruses prompt us to this additional avenue: to question the nature of reality as such. Whether this has been adequately addressed in Christian creation theology can be debated.

In the following section, the various lines of thought having crystallised in the brief perspectives on Virology and Philosophy of Biology, and on theology can be assembled in a preliminary coherent proposal.

## Nature of reality – Equivocity of being?

Despite the fact that the academic study of viruses has experienced an impressive growth and development in the discipline of Virology, the attention to the virosphere has sadly not materialised in the Philosophy of Biology or in theology. There has been some tuning of antennas to this bio-reality in recent years. It is anticipated that COVID-19 would stimulate much greater awareness of the sheer dimensions of this phenomenon and the immense role and impact in the eco-system. That viruses are complex entities which could be destructive, but that they are also agents of genetic diversity and novelty prompts fundamental thinking. When these two features are coupled with the astounding ability of adaptation, one grasps the opportunity and need for philosophical reflection.

The challenge is to assign some form of adjectival quality to the nature of the dynamics we as humans deduce from

perception. As has been pointed out earlier in the sections on 'perspectives', notions like *process* and *entanglement* are the most obvious ones. In both science and the theology of creation, these turns to development and relationality have been embraced, and have even become axiomatic categories to think about life and nature. As seen in the study of viruses these do, however, not exhaust description of the complexity of reality. That viruses can function in a 'good' and 'destructive' manner and have the ability to form variants call for further ascription.

In theology, the reflex to introduce the notion of evil is an automatic one. It is part of the matrix of the Christian faith of making sense of life, and has a long and pluralistic history of tradition-formation. References to an original fall and original sin, to Satan and demons, and to a dark side of chaotic forces which threaten to undo God's good creation are all well-known. A serious question could be raised whether these elements of the tradition can viably interpret the phenomenon of viruses and their multi-levelled way of functioning. Could theologians encounter here, as part of the dialogue with science, a stimulus for *a new trajectory* in their probing of creation?

In a recent article the scientist and theologian Southgate (2021), who has established himself as a major exponent of evolutionary theodicy, recounts a discussion between the New Testament scholar Wright and scientist Collins, and from this event he distils two options of explanation: a so-called 'semi-dualistic' one, and a 'package-deal' (Southgate 2021:24). It is clear from the treatment that Southgate displays an affinity for Collins's view of the ambiguous character of the biological world, stating 'we must face up, beyond theodicies, to the facts of this ambiguous world' (Southgate 2021:30, 31). He does not explore this in any depth, as his interest is primarily pastoral and not philosophical.

The thrust of this article is ontological and the notion of ambiguity is suggestive. As a first intimation I would propose that 'equivocity' may be considered as a category for thinking about reality. The way reality functions allows for more than one interpretation. Aspects of nature appear potentially with a variety of senses. The notion of 'equivocity of being' appears in a philosophical treatment of the different concepts of ontology by Heidegger and Deleuze (see article by Rae 2021). This may be transposed to a different context to give expression to the ambiguous experiences one may have of viruses.

The benefits of such an ontology for an interdisciplinary conversation between theology and science should be grasped. By focusing on ontology, a different basis for a dialogue is selected, than, for example, rationality by Van Huyssteen (see 1999). A common basis for departure is identified which would then be interpreted by the various disciplines which may be mutually challenging and enriching. This may potentially allow the overcoming of asymmetry in the dialogue, that is, allowing a space for

theology for making a contribution. The adjustment of theology, for example, in the doctrine of creation, has been a perennial feature of the interaction with the sciences. *Three advantages* can be identified. Firstly, an ontology of equivocity is associated with indeterminacy, with openness, and – this is crucial – the possibility of mystery and transcendence. For Virology, with its naturalistic propensities, this calls at least for the labour of a Philosophy of Biology, which probes some meaning to the process of, for example, for viral adaptation. For theology an equivocal approach to being allows for speculation about divine action. This, obviously, alludes to a voluminous and well-known discourse. If divine action is re-imagined pneumatologically, as is found in the state of scholarship, the divine Spirit could be interpreted not only as the Spirit of Life, but also as the Spirit of chaos (see Van Ruler 1972). The aim of interdisciplinary work is precisely to challenge the settled states of knowledge. Secondly, an ontology of equivocity possesses inherently a surplus of meaning, which enables an inexhaustible range of interpretations. This counters simplistic and univocal states of knowledge which are often accompanied by positivistic inclinations. The complexity of life requires regimes of knowledge which are tentative, tolerant and ever expanding, even allowing for transcendence. Thirdly, an ontology of equivocity points to the intricate intertwinement of being, knowing and action. For an anthropocene age this may be vital: life depends on how humans interpret it and live that life. Practices may shape the being of entities, and the being of microbes may shape human life. An option for equivocity may refocus the commonality between science and theology: the critical option for life, for flourishing.

## Conclusion

The COVID-19 pandemic has caused pain and disruption, but also the possibility of new insight in the very nature of life. An interdisciplinary way of thinking about the meaning of this event is clearly the way to go, and when such seemingly deeply divergent disciplines like Virology and theology are interfaced, surprising insights might emerge philosophically. Development in Virology may counter simplistic notions of evil in theology, and central intuitions in theology may resist positivistic interpretations in science. The ambiguity to which viruses may attest to, may stimulate new understandings of life. The equivocity of being may do justice to the findings in Virology and to the sensibilities in Christian creation theology.

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The author declares that he has no financial or personal relationships that may have inappropriately influenced him in writing this article.

### Author's contributions

R.V. is the sole author of this article.

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Data sharing is not applicable to this article as no new data were created or analysed in this study.

## Disclaimer

The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any affiliated agency of the author.

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