

13. Krause's Importance for Philosophy of Mind

Krause's pantheism, systematically considered, is of great contemporary relevance for the philosophy of mind because it is capable of solving some important systematic problems of contemporary panpsychism. In what follows, a plausible version of the panpsychist thesis is worked out before two arguments for panpsychism are examined for their soundness. In a next step, two arguments against the developed panpsychist thesis are discussed, which, *prima facie*, pose theoretically insurmountable *aporia* for it. In a final step, it is argued that panpsychism as located in analytical philosophy can overcome these problems when it is included in the wider theoretical framework of pantheism, as it is set out in Krause's system of philosophy.

13.1 Panpsychism in the philosophy of mind

Panpsychism is a metaphysical theory about the fundamental structure of reality and the ontological categories which constitute it. It rests on the assumption that we dispose of epistemologically reliable access to the fundamental structures of reality that may be grounded both through our natural scientific and through our transcendental relationship to reality. As a first approximation, the intuition lying behind panpsychism admits of the following formulation: *both physical and mental properties are fundamental characteristics of reality*. Because this formulation does not specify the central concepts, the panpsychist intuition must be explicated in several ways in order to develop a clear thesis of panpsychism.

That physical and mental properties are fundamental characteristics of reality, means that mental properties cannot be reduced either semantically or ontologically to non-mental properties nor can physical properties be reduced either semantically or ontologically to non-physical properties. In panpsychism, both mental and physical properties, respectively, form an ontological category of reality-constituting entities.⁷⁵

⁷⁵ See Chalmers (1996: 126) and Blamauer (2011: 9). See the collections edited by Göcke (2012), and Koons/Bealer (2010) for critical analyses of physicalism,

By the assumption that physical properties are fundamental, panpsychism is distinguished from idealism from which it follows that physical properties can be reduced to mental properties. The demarcation of panpsychism from classical property dualism is more difficult. The latter is consistent with the panpsychist intuition that mental and physical properties are fundamental properties. However, while classical property dualism implies that mental properties are only properties of higher creatures and humans, who have a complex nervous system, and that some physical things possess only physical properties, the panpsychist generally assumes that the class of those entities that possess mental qualities is far wider than the class of higher creatures and humans.

However, within the panpsychist debate, there is no unanimity about how exactly this class is to be determined. As a minimum consensus, and line demarcating panpsychism from classical property dualism, the different manifestations of panpsychism have in common only the assumption that, in addition to humans and higher creatures, the fundamental physical entities constituting empirical reality, that is, the smallest building blocks of the physical universe, possess mental and physical properties. The panpsychist assumes that between the exemplification of mental and physical properties at the fundamental ontological level of reality there obtains a factual equivalence, which, on the ground of the opposed semantic and ontological irreducibility of mental to physical properties, can only be known *a posteriori*, not *a priori*. It therefore follows from panpsychism that mentality is, at the fundamental level of reality, one ubiquitous and underlying property of reality.

The question of which conditions must be fulfilled for other entities to be able to be spoken of as exemplifying mental and physical properties is variously answered by panpsychists. Some panpsychists assume that a necessary and sufficient condition for the exemplification of mental properties lies in the structure of complex physical objects. They argue that, although organisms at every stage of development exemplify mental properties, pure aggregates of physical entities such as tables or stones must be excluded.

and Kim (2005) for an argument against non-reductive physicalism. See Göcke (2012a) for an argument that phenomenal experience belongs ontologically to the fundamental level of reality.

For, in those, the physical building blocks do not form a well-ordered whole, in which each part is connected with every other part, and with the whole, in a whole constituting interaction.⁷⁶

To overcome the explanatory difficulty that, in every version of panpsychism, mentality is ascribed to the fundamental, and so simple, building blocks of reality, even though these are not necessarily part of any complex physical structure, other panpsychists argue, rather, for the thesis that every entity, on every level of complexity, exemplifies both physical and mental properties. The difficulty here consists in the fact that it is not clear how exactly physical entities, which are not fundamental building blocks of reality, may be ontologically individuated.⁷⁷

In what follows, I at first bracket these difficulties and proceed from the minimal formulation of the panpsychist thesis, which ascribes mental and physical properties only to the fundamental building blocks of reality and higher living beings and humans, since this thesis sufficiently specifies, and places under discussion, the essential elements of panpsychist thinking. We hold to the following specification of the minimal panpsychist thesis: *both mental and physical properties are ontologically fundamental and, in their exemplification, factually equivalent properties of both the fundamental entities constituting reality and the higher creatures and human beings.*

The minimal panpsychist thesis remains unclear until the concepts of physical and mental properties are specified. In the following I therefore ignore abstract properties and assume that mental and physical properties are the only metaphysically relevant property types.

76 See, for this kind of panpsychism Clarke (2004: 5). See also Brüntrup/Jaskolla (2016a: 2): ‘Most forms of panpsychism, however, distinguish between mere conglomerates like a rock formation and genuine individuals like animals and possibly elementary particles. Mental properties can only be attributed directly to genuine individuals.’

77 For this variant of panpsychism see Blamauer (2011b: 338): ‘Panpsychism is commonly understood as a doctrine that states that everything that occurs in the world has, in itself, a form of consciousness. That is, consciousness is not just a particular human property, but one that may be found on all levels of our universe. Mental properties (conscious experience, subjectivity, etc.) and physical properties (mass, charge, spin, etc.) are both fundamental and universal.’ See also Buck (2011: 60).

Based on this premise, in a first step, mental properties can be classified as those properties which logically imply the existence of a subject of experience.⁷⁸ The concept of a subject of experience is thereby minimally interpreted ontologically, and implies only that, on logico-conceptual grounds, we can think no mental property of which the exemplification does not imply the existence of a subject which is the ontological bearer of this property.⁷⁹

Mental properties can be further specified as intentional und qualitative properties: every mental property implies both elements of relatedness to an intentional object and elements of phenomenal givenness. Mental properties are therefore exactly those properties which imply the existence of a minimally ontologically understood subject of experience that is intentionally related to an object, which appears to it in a certain phenomenal manner, and brings with it a what-it-is-likeness for the subject of experience of this state. Mental properties are thereby intrinsically categorial properties of a subject of experience.⁸⁰

78 See Foster (1991: 205): 'If P is a pain-sensation occurring at a certain time t [...] we should ultimately represent the occurrence of P as the event of a certain subject's being in pain at t . And if D is a decision occurring at t , [...] we should ultimately represent the occurrence of D as the event of a certain subject's taking a decision at t . Quite generally, [...] we must represent each episode of mentality as the event of a subject's being in a certain mental state at a certain time, or performing a certain act at a certain time, or engaging in a certain mental activity over a certain period of time.' See also Shoemaker (1986: 10): '[It is] an obvious conceptual truth that an experiencing is necessarily an experiencing by a subject of experience, and involves that subject as intimately as a branch-bending involves a branch.'

79 Strawson (2006: 192) describes the ontologically minimal requirement on subject of experience as the 'thin conception', as follows: 'The thin conception according to which a subject of experience, a true and actual subject of experience, does not and cannot exist without experience also existing, experience which it is having itself.'

80 See Strawson (2006: 189): 'Experience necessarily involves experiential "what-it-is-likeness", and experiential what-it-is-likeness is necessarily what-it-is-likeness *for* someone-or-something. Whatever the correct account of the substantial nature of this experiencing something, its existence cannot be denied.' See also Blamauer (2011: 103). On the difficulty of determining the concept of intrinsic properties, see Seager (2006: 129–30): 'The philosophical literature on the distinction between intrinsic and extrinsic properties (or relational properties) is vexed and very far from settled. The core intuition would seem to be the idea that the intrinsic properties of x are the properties that all duplicates of x would

Based on this understanding of mental properties, physical properties may, as a first step, be defined *ex negativo*: physical properties are exactly those properties which are not mental properties. That is, the exemplification of physical properties does not conceptually imply the existence of a subject of experience, that is phenomenally directed towards some intentional content. There are two possibilities for arriving at a positive concept of physical properties, complementary to this aspect: the theory-based and the object-based account. The object-based approach to the concept of physical properties rests on the assumption that physical properties are exactly those which are exemplified by paradigmatic physical objects, or locally supervene on these. The theory-based approach rests on the assumption that exactly those properties are physical which are part of the ontological inventory of a physical theory, or supervene locally on these properties.⁸¹

Both approaches are confronted with difficulties. The difficulty of the object-based approach is that, on the one hand, it is not clear what exactly a paradigmatic physical object is, and how agreement about this could be achieved, and, on the other hand, it is not excluded that paradigmatic physical objects exemplify mental properties. If, then, all the properties of a paradigmatic physical object were classified as physical properties, then it could happen that the conceptual dichotomy between mental and physical properties itself collapses.

The difficulty of the theory-based approach is, on the one hand, that it is not clear which properties a complete and true physical theory implies, because current physical theories frequently change and turn out to be false. Based on pessimistic meta-induction, it is to be expected that our present

have [...] That is, the intrinsics are the properties X has “all by itself” or “of its own nature”.’

81 See Stoljar (2002: 313): ‘A physical property is a property which either is the sort of property required by a complete account of the intrinsic nature of paradigmatic physical objects and their constituents or else is a property which metaphysically or logically supervenes on the sort of property required by a complete account of the intrinsic nature of paradigmatic physical objects and their constituents.’ See also Stoljar (2002: 313): ‘A physical property is a property which either is the sort of property that physical theory tells us about or else is a property which metaphysically (logically) supervenes on the sort of property that physical theory tells us about.’

best physical theories will also be overturned, and new physical theories will be developed that incorporate new or other physical properties into their ontological inventory. Similarly to the object-based approach, the fact that genuine mental properties can be included in the theoretical framework of physics can also be applied to the theory-based approach.⁸²

Nevertheless, the theory-based approach seems to me to be the more promising approach. However, in order to arrive at a positive determination of physical properties, it must, in one respect, be made specific and, in another, qualified. To avoid the case where mental properties are classed as physical properties if they were included in a possible future widening of the ground of physical theories, the theory-based approach must be restricted to the fact that physical properties are exactly the properties assumed in a complete and adequate physical theory; at least as long as we are not dealing with any ontologically surprising extension of the currently known physical theories. Although not excluded, it would be particularly ontologically surprising if physical theories were to incorporate mental properties as mental properties into their ontological inventory.

Based on this restriction, the specification of the theory-based approach assumes that a decisive feature of properties found in physical theories, both in the past and in the present as well as in any non-ontologically surprising physical theory, consists in physical properties being exclusively construed as dispositions, that is, as structural or extrinsic properties: any fundamental physical property is defined by its relation to other physical properties and its dispositional behaviour in certain situations.⁸³ This is faintly surprising, because the approach of an empirically serviceable physics, aside from its epistemological preconditions which may also contain *a priori* elements, is essentially based on experiments and trials. The structure of the experimental reference to reality is based on dispositions and structures: in the experiment, the researcher interrogates empirical

82 See Melnyk (1997: 623–24). See Crook/Gillet (2001: 349). See also Göcke (2009) and (2014) for a deeper analysis of the nature of mental and physical properties.

83 See Blackburn (1990: 63–64): ‘Just as the molecular theory gives us only things with dispositions, so any conceivable improvement in science will give us only a better pattern of dispositions and powers. That’s the way physics works.’ See also Brüntrup (2011: 17).

reality to find out how it behaves under certain context-variant conditions. That is, the experiment, as the fundamental scientific relation to the world is, by its very nature, directed to dispositions. It is thereby in the excellent position of being exclusively structural, that is, of exploring extrinsic properties of the building blocks of reality empirically.⁸⁴

The thesis of physical structuralism emerges *eo ipso* on the basis of this determination of physical properties. This means that the image of the fundamental structure of empirical reality, drawn by physics, is a picture of structural connections which provides information about the extrinsic relations of a causally closed system, and describes in mathematical and logical terms how physical entities in particular situations within this structure behave, dispositionally.⁸⁵

The property of being an electron, for example, is defined by the way an electron behaves dispositionally in certain situations. In physics, everything that behaves like an electron is an electron. The fact that there are electrons is therefore no more than that there are certain entities X which behave in way Z in situation Y, and everything that happens in situation Y in manner Z is identified in physics as an electron.⁸⁶ Therefore, in contrast to mental properties, whose essence is their intrinsic-categorical existence for a subject of experience, physical properties are extrinsic-relational and thus dispositionally determined.

Based on the assumption that mental properties represent an intentional object phenomenally to a subject of experience, and are therefore intrinsic-categorical properties of this subject of experience, and given that physical properties are extrinsic properties of reality-constituting entities,

84 See Russell (1927: 254): ‘It would seem that wherever we infer from perceptions it is only structure that we can validly infer; and structure is what can be expressed by mathematical logic.’

85 On the causal closure of the structure of the physical universe, see Clayton (2008: 135).

86 See Mumford (2008: 234): ‘An electron is an electron solely in virtue of its dispositions to behave; hence anything that was not disposed to behave in this kind of way would not be an electron but some other kind of subatomic entity.’ Bird (2009: 189) argues as follows: ‘The ultimate explanation of why what happens does happen, of the existence of regularities, of the possibility of science, is the existence and nature of essentially dispositional properties.’

the minimal panpsychist thesis admits of being specified as follows: *both mental and physical properties are ontologically foundational, not reducible to one another but factually equivalent in their exemplification by both the fundamental reality-constituting entities, and higher living creatures and human beings, in such a way that all fundamental entities, and higher living beings and human beings, are genuine subjects of experience, who have a phenomenal inner life, and are involved dispositionally in structures described by physics, due to their extrinsic properties.*⁸⁷

Just as it is somehow phenomenal to be Benedikt Göcke, and to write this book, there is also, somehow, something it consists in to be a photon and fly through the universe. However, even if the panpsychist is willingly to be imputed this, he is not obliged to accept the basic building blocks of reality as a consciousness oriented towards the complex, phenomenal life of humanity.⁸⁸ The developed thesis of panpsychism merely states *that* there is, in each case, a phenomenal inner life of the fundamental building blocks of reality, which implies the existence of an ontologically minimally understood subject of experience, and, in this sense only, is similar to our own phenomenal experience. The developed thesis of panpsychism is thereby consistent with the fact that the phenomenal experience of the basic building blocks of reality can vary greatly from our experience of reality, and is *sensu stricto* epistemologically closed to us, as is the subjective experience of other people and higher living beings.⁸⁹

87 Thomas Nagel says panpsychism is the thesis that ‘the basic physical constituents of the universe have mental properties, whether or not they are part of living organism’ (Nagel 1979: 181). See also Blamauer (2011a: 102): ‘Panpsychism is – in short – typically understood to be the view that consciousness experience is a fundamental as well as ubiquitous characteristic of our universe, equal to physical properties like mass, charge, and spin.’ See also Seager/Allen-Hermanson (2017): ‘Panpsychism is the doctrine that mind is a fundamental feature of the world which exists throughout the universe.’

88 For this objection, see McGinn (2006: 95): ‘Is it really to be supposed that a particle can enjoy these kinds of [human] experiences – say feeling depressed at its monotonous life of orbiting a nucleus but occasionally cheered up by its experience of musical notes?’ See also Lycan (2006: 70). For a contrary argument see Pfeifer (2016: 45).

89 See Brüntrup/Jaskolla (2016: 4): ‘But similarity is not a transitive relation. Mental properties at the fundamental level might well be wildly dissimilar from

13.2 Arguments for panpsychism

The panpsychistic thesis, because of its *prima facie* absurdity, often evokes adverse reactions, since the natural attitude in life does not usually assume that the physical foundations of reality are subjects of experience with a phenomenal inner perspective. For the English philosopher Colin McGinn, for example, panpsychism is reminiscent of the 1968 movement, and is described by him as little more than a ‘comfortable piece of utter balderdash’.⁹⁰ However, because philosophy requires separating the genesis and the truth of a theory from one another, it must be soberly asked which arguments speak for panpsychism.

The argument from the homogeneity of cosmic evolution is based on the assumption that evolutionary processes, whose similarity is characterized by the development of complex entities and structures from simple entities and structures, play out on both the cosmic and the biological level. Against this background, the argument of the homogeneity of cosmic evolution assumes that the only plausible explanatory model consistent with the natural sciences for the factual existence of complex phenomenal life presupposes that every basic physical entity possesses mental properties. It may be formulated as follows:

- (1) Cosmic evolution has led to the development of physical creatures, which call a complex, phenomenal-intrinsic inner life its own.
- (2) Cosmic evolution can only lead to the development of physical beings that call a complex phenomenal-intrinsic inner life their own when mental properties are either (a) bound by divine intervention to the representation of physical properties, or (b) by supervenience, or,

those found in living organisms. The highly speculative and abstract character of panpsychism has thus always to be kept in mind. Panpsychism is a possible move in the logical space of metaphysics, not a crude animalistic view of matter.’ To distinguish human phenomenal experience from the phenomenal experience of the basic building blocks of reality, some panpsychists introduce the concept of proto-mentality. See Rugel (2011: 115–16) and Jaskolla (2011a: 70).

90 See McGinn (2006: 93): ‘Any reflective person must feel the pull of panpsychism once in a while. It’s almost as good as pantheism! The trouble is that it’s a complete myth, a comfortable piece of utter balderdash [...] and isn’t there something vaguely hippish, i.e. stoned, about the doctrine?’

- (c) mental properties emerge from complex physical properties, or (d) each basic physical entity has mental properties.
- (3) Mental properties are not bound to physical properties by divine intervention.
 - (4) Supervenience is no explanation of the existence of mental properties.
 - (5) Mental properties do not emerge from physical properties.

Therefore:

- (6) Each basic physical entity has mental properties.

Therefore:

- (7) Each basic physical entity has mental properties, and some complex physical beings have mental properties.

The argument is valid: if the premises are true, then it is not possible that the conclusion is false. The decisive question, therefore, is the soundness of the argument, so is about the truth of the premises. The first premise seems to be true: that cosmic evolution has led to the development of living creatures that have a complex, phenomenal, inner life can be confirmed by oneself. The second premise is also true because it covers all relevant explanatory types of emergence and existence of complex phenomenal life. At least as far as I know, no other alternatives are mentioned in the discussion.

The decisive premises are therefore (3) to (5). The third premise, that is, the assumption that mental properties have been brought into the world by a decision of divine will at a certain time of cosmic evolution, to correlate with certain physical properties, is in the present discussion as a framework of a metaphysical explanation of the emergence of consciousness on two grounds rarely treated: on the one hand, one is aware that, although a theological necessity for the possibility of God's significant action in the world obtains, if central elements of Christian thought are not anchored within the framework of deism or nominalism, but within the framework of theist conceptions of God, the recourse to divine action is difficult to justify in detail. And one runs the danger of integrating God into the striven for ultimate foundation, only as an explanatory gap filler. On the other hand, a theological explanation of the existence of complex phenomenal life points directly to the other explanatory models mentioned in the argument. For it would have to specify through which metaphysical means, or natural laws,

the existence of mental states and their correlation with physical states is assured by divine action.⁹¹

The fourth premise, that is, the assumption that mental properties supervene on physical properties, may be excluded as an explanation of the possibility of the existence of mental properties. Supervenience does not denote the causal, but the logical relation between properties of different property classes. It generally states that there can be no difference on the supervenient level without difference on the subvenient level but there may be a difference on the subvenient level without any difference on the supervenient level. That mental properties supervene on physical properties may well be the case accidentally. However, the supervening relationship does not explain how mental properties have come into the world but already presupposes their existence.

The fifth premise entails that there is a causal relationship between the existence of physical properties and the existence of mental properties. The concept of weak emergence is based on the fact that F is a weakly emergent property of a physical system S, with a specific microstructure (P1, ..., PN), if and only if the natural laws logically imply that every physical system S with microstructure (P1, ..., PN) exemplifies property F, but the property F cannot be reduced to the properties of the microstructural entities. The concept of strong emergence assumes that F is a strongly emergent property of a physical system (P1, ..., PN): Although each system S with microstructure (P1, ..., PN) exemplifies property F, this exemplification of F does not logically follow from the natural laws, but is a *factum brutum*.⁹²

Based on this understanding of the two forms of emergence, a weak emergence of mental properties can next be excluded from physical properties. While, for example, liquidity is a weakly emergent property of accumulations of H₂O molecules that can be explained by natural laws, this is not the case with mental properties, because it does not follow logically from the natural laws that systems that have a certain physical microstructure have a certain mental characteristic.⁹³

91 See, however, Hasker (2001) und Swinburne (1997) for an analysis of the explanatory relevance of divine action for the existence of mental states.

92 See Brüntrup (2012: 68).

93 See Strawson (2006a: 13): 'Liquidity is often proposed as a translucent example of an emergent phenomenon, and the facts seem straightforward. Liquidity is

If mental properties emerge from physical properties, then they must be strongly emergent properties of physical systems. This possibility, however, is excluded because of the essential differences between extrinsic-relational physical and intrinsic-categorical mental properties. For it is absurd to assume that a purely extrinsically determined structure, which has no intrinsic-phenomenal properties, is in a position to bring about the existence of intrinsic-mental properties. This would be as absurd the assumption that a space-time universe is constituted by a structure of abstract mathematical entities.⁹⁴

Because neither divine intervention nor supervenience and strong emergence can explain the existence of complex phenomenal life, following the argument from the homogeneity of cosmic evolution, the last remaining possibility for explaining the existence of complex phenomenal experience, is this: mentality is not a new phenomenon of the universe, but one of its own essential features: even the smallest building blocks of reality have phenomenal properties that belong to the same ontological category as human phenomenal experience. Mental properties therefore belong to the ontological basis of reality.⁹⁵

The argument from intrinsic natures supports the genetic argument by analysing the ontological carrier of the dispositional structures investigated by the physical sciences. It argues that mental qualities are the only plausible candidate to fulfil this crucial role of metaphysical explanation of

not a characteristic of individual H₂O molecules. Nor is it a characteristic of the ultimates of which H₂O molecules are composed. Yet when you put many H₂O molecules together they constitute a liquid (at certain temperatures, at least), they constitute something liquid. So liquidity is a truly emergent property of certain groups of H₂O molecules. It is not there at the bottom of things, and then it is there.'

94 See Strawson (2006a: 15). See McGinn (2000) for an argument that we are simply too limited to understand how mental properties emerge from physical properties.

95 See James (1950: 149): 'And Consciousness, however small, is an illegitimate birth in any philosophy that starts without it, and yet professes to explain all fact by continuous evolution. *If evolution is to work smoothly, consciousness in some shape must have been present at the very origin of things.* Accordingly we find that the more clear-sighted evolutionary philosophers are beginning to post it there. Each atom of the nebula, they suppose, must have had an aboriginal atom of consciousness linked with it.'

the existence of empirical reality. The following is an argument with three assumptions and the panpsychist conclusion outlined:

- (1) If there is an intrinsic nature of fundamental physical entities, the physical sciences cannot give us any information about this.
- (2) There is an intrinsic nature of fundamental physical entities.
- (3) If there is an intrinsic nature of fundamental physical entities, the only plausible candidate for this intrinsic essence of fundamental physical entities is phenomenal consciousness.

Therefore:

- (4) Fundamental physical entities have phenomenal consciousness.

Therefore:

- (5) Fundamental physical entities have phenomenal consciousness, and some complex physical beings have mental properties.

The argument is logically valid, so the crucial question is the question of the plausibility of the premises. The first premise is true: we have already seen that the physical sciences examine only the dispositional behaviour of physical entities, and this approach leads to physical structuralism, which does not imply any ontological statements about the intrinsic-categorical properties of physical entities whose dispositions are examined.⁹⁶

All the theoretical terms of the physical description of the fundamental structures of the universe, such as the terms ‘electron’, ‘spin’, or ‘photon’, can therefore be removed by the method of Ramseyfication, which replaces each of these terms with an existential bound variable, without the result that the physically obtained state of knowledge is changed. There remains the assertion that there are things which fulfil a certain dispositional function and, because of this, are part of a larger mathematically describable structure.⁹⁷

96 See Williams (2011: 74): ‘Physical theory describes the fundamental physical entities exclusively in dispositional terms.’ See Russell (1948: 240): ‘The physical world is only known as regards certain abstract features of its space-time structure – features which, because of their abstractness, do not suffice to show whether the world is, or is not, different in intrinsic character from the world of mind.’

97 See Brüntrup (2011: 16).

The second premise is also true and may be justified by a *reductio ad absurdum* of its negation. If one assumes that there is no intrinsic-categorical nature of the basic physical entities, it is assumed that the investigated dispositional properties may exist in themselves, and cannot be constituted ontologically by categorial properties of the basic physical entities.⁹⁸

This results in two problems: firstly, in property theory, it is assumed that it is precisely the intrinsic-categorical properties of things that explain their dispositional behaviour, from a metaphysical viewpoint; by the fact that an entity X, in situation S, behaves the way Z in virtue of its intrinsic-categorical properties M.⁹⁹ Without a categorial basis, that is, without the intrinsic properties of the basic physical entities, it would be metaphysically incomprehensible how their specific dispositional behaviour is possible at all.¹⁰⁰ Secondly, the assumption that there is no intrinsic-categorical nature to the basic physical entities either leads to the conclusion that we live in an abstract mathematical structure, or to the assumption that empirical reality, as concrete empirical reality, is a strongly emergent property of an abstract mathematical structure. Both assumptions are absurd and form a classical dilemma situation: on the one hand, the denial of the existence of an intrinsic nature to the basic physical entities leads to the conclusion that we live in an abstract mathematical structure. It implies that the

98 See Seager (2006: 138): ‘Why should matter have any intrinsic properties at all? An alternative view is that all there is to matter is the set of inter-relationships which science reveals.’ See also Brüntrup (2011: 25).

99 See Williams (2011: 71–72): ‘Categorialism (sometimes known as “Categorial Realism”) is the thesis that all dispositions must ultimately have categorial properties that ground them; it is this thesis that the dispositional essentialist denies when she claims that some or all dispositions can be baseless.’

100 See Seager (2006: 141): ‘Dispositions require a categorial base. A good number, perhaps most or conceivably even all of the relational properties which science discovers about matter are causal dispositions. If dispositions require (metaphysically) a base of intrinsic properties which determines their powers then we have an argument from the relations structures revealed by science to the need for some intrinsic nature which subvenes these powers.’ See Williams (2011: 72): ‘Categorial properties lack essential causal and modal features, so something must be added for a categorial property to properly ground a disposition. Nevertheless, as categorialism concerns what is necessary for grounding dispositions, questions of what that additional something might be can be set aside.’

mathematical structures described in physics are ultimate reality: all that exists are structures without any categorial basis in the properties of things. For physics cannot say anything about the intrinsic nature of reality.¹⁰¹ To avoid this absurd conclusion, on the other hand, it could only be assumed that concrete reality is a highly emergent property of a special mathematical structure, and thus also an absurd *factum brutum*.¹⁰²

Without intrinsic categorial properties, therefore, it is not possible for the structure discovered by physics, and described in mathematical terms, to have any concrete reality at all. This means that physical entities have intrinsic natures and thus the second premise is justified.¹⁰³

The third premise is decisive for the soundness of the argument. It is justified, in a first step, by the fact that the only case in which we can have epistemologically unproblematic, direct, certain, access to intrinsic-categorial properties of a physical entity is the case of one's own phenomenal experience. For our mental qualities are such that they may be distinguished from the dispositional-extrinsic properties of physics, as intrinsic-categorial properties, by their perspective-phenomenal existence.¹⁰⁴ Based on the assumption that it is epistemologically legitimate to extrapolate from the immediately certain knowledge of one's own intrinsic essence to the intrinsic nature of all physical entities, it follows, in a final argumentative step, that we recognize mentality as the ontological carrier for physical reality.

101 See Brüntrup (2011: 30): 'But if there are no carriers, then the formal, mathematical structure is the ultimate reality.'

102 See Brüntrup (2011: 30): 'How the concrete physical world as we know it emerges from this mathematical structure is a case of mysterious inter-attribute emergence, in this case the emergence of *concrete* physical objects from *abstract* mathematical structures.'

103 See Brüntrup (2016b: 55): 'We need ultimate intrinsic properties that carry the entire existing set of functional-relational properties.'

104 See Seager (2006: 136): 'Matter must have an intrinsic nature to ground the relational or structural features revealed to us by physical science. We are aware of but one intrinsic property of things, and that is consciousness. [...] We are physical beings and our consciousness is a feature of certain physical structures.' See also Brüntrup (2011a: 44). See Eddington (1920: 200) and Russell (1927: 402). See also Russell (1927a: 300).

13.3 Arguments against panpsychism

Although there are two good arguments for panpsychism, at least two good arguments may be formulated against panpsychism, each of which can be understood as the obverse of the arguments which speak for it.

The argument from the absurd multiplication of subjects of experience concentrates on the minimal panpsychist thesis that all basic physical entities, and only some complex physical entities, have mental properties. It attempts to show that there is no objective concept of physical complexity to determine which physical structures are sufficient and necessary for the development of complex phenomenal life. On the argument, therefore, panpsychism implies that every physical structure correlates with the existence of a subject of experience, and thus leads to an absurd multiplication of the number of existing subjects of experience. The argument may be formulated as follows:

- (1) The limitations of the minimal panpsychist thesis, with respect to the number of existing subjects of experience, is plausible when there are objectively necessary and sufficient conditions for when a physical structure leads to the development of complex phenomenal life, and thus to the existence of a separate subject of experience.
- (2) There are no objectively necessary and sufficient conditions for when a physical structure leads to the development of complex phenomenal life, and thus to the existence of a separate subject of experience.
- (3) The limitations of the minimal panpsychist thesis regarding the number of existing subjects of experience are not plausible.
- (4) If the limitations of the minimal panpsychist thesis are not plausible with regard to the number of existing subjects of experience, then they should be abolished.
- (5) If the restrictions are lifted, panpsychism implies that each physical structure correlates with the existence of a subject of experience.
- (6) It is absurd that any physical structure correlates with the existence of a subject of experience.

Therefore:

- (7) Panpsychism is false.

Because the argument is logically valid, it is necessary to ask how the premises are justified. The first assumption is true: the minimal panpsychist thesis assumes that, in addition to the basic physical building blocks, only a few complex physical structures such as humans and higher living beings possess mental properties and constitute independent experiential substructures. This presupposes that there are objectively necessary and sufficient conditions for when a physical structure leads to the development of complex phenomenal life and thus to the existence of a separate subject of experience.

The second premise states that there are no such objective criteria, since the assumption that there are persisting complex physical objects cannot be justified against the background of physical structuralism. The reason is that structuralism implies that, in a sense, there is only one physical structure, and the relations it specifies between the physically fundamental entities, and it therefore leads to nominalism about macroscopic objects. What is addressed semantically as a complex persistent physical object is thus based on linguistic convention. Furthermore, because of the causal closure of physical reality, for any two basic entities, they are in a causal context which makes it possible to speak of them as a complex structure.¹⁰⁵ Any setting of necessary and sufficient conditions for the development of a rich phenomenal life is therefore an arbitrary semantic stipulation.

However, as the third premise of the argument implies, without necessary and sufficient criteria for the physical complexity necessary for a rich phenomenal experience, the restrictions of the number of experiential phenomena of complex phenomenal life, defined in the minimal panpsychist thesis, must be abandoned. For it is not clear why basic physical entities, and only a few other physical structures should be thought of as correlated with genuine subjects of experience.

105 See Mathews (2011: 144): ‘The individuation of objects, at the macro-level, at any rate, is not consistently objectively determined [...]. Matter is not really, in any ontological sense, parcelled up into convenient units or packages, despite the plethora of discrete artefacts in our own daily life that suggest that it is. Indeed, many of our individuations – of rocks and mountains, for instance – have basically nominal status.’ See also Skrbina (2011: 126–127).

To save panpsychism *prima facie*, on the fourth premise of the argument, it must be assumed that, in fact, any physical structure is correlated with the existence of a genuine subject of experience.¹⁰⁶ As this consequence implies that tables, and planetary systems, and forests, and the sum of the table and the chairs in this space (let us call them ‘tairs’), should be classified as genuine experiential subjects, the panpsychist thesis *secunda facie* should be rejected, due to an absurd multiplication of subjects of experience.

The fact that panpsychism leads to a *prima facie* absurd multiplication of existing subjects of experience seems to be a strong argument against its plausibility as a metaphysical theory. But it does not really show the inconsistency but only the epistemic significance of panpsychism, against the background of our general assumptions about the existence of subjects of experience. The argument is therefore flanked by a further argument that shows that, in the context of a panpsychist ontology, it is not clear how new subjects of experience may emerge from the mental properties of the basic physical entities, regardless of the structures that they constitute:

- (1) All basic physical entities are subjects of experience, and there is at least one subject of experience S that is not a basic physical entity but a complex physical entity.
- (2) If all basic physical entities are subjects of experience, and there is at least one subject of experience S that is not a basic physical entity but a complex physical entity, panpsychism must be able to explain the existence of S, by recourse to the physical complexity of S.
- (3) Panpsychism cannot explain the existence of S by recourse to the physical complexity of S

Therefore:

- (4) Panpsychism is false.

The truth of the premises is decisive for the soundness of the argument. The first premise is definitively true, because it expresses the minimal panpsychist

106 Skrbina (2011: 121–22) takes exactly this route: ‘[T]he body indeed has innumerable lesser selves: organs, cells, macromolecules, proteins, atoms, and so on. All of these (except the atomic ultimates) are themselves composed of lesser selves, and all participate in higher-order minds.’

thesis. The second premise is also true: we know from the argument from the homogeneity of cosmic evolution that the panpsychist assumes that the basic physical building blocks of the universe are conscious and, in the course of cosmic evolution, through the formation of complex structures, higher levels of experience are constituted, by the mentality of the basic building blocks. If this constitution of higher-level empirical subjects is not to be postulated simply by implication, the panpsychist must explain how it is possible that new subjects, different from the fundamental experiential subjects, can exist.

The starting point of the combination problem is to take up this explanatory requirement and put it to the panpsychist, in the third premise of the argument, that he cannot fulfil this task which is necessary for him. For it would only be possible with reference to strong emergence, setting the origin and existence of a subject of experience's complex phenomenal life in relation to the existence of basic subjects of experience.

The assumption that the existence of complex subjects of experience can only be explained by reference to strong emergence may be justified as follows: if m is the ordered set of basic physical subjects of experience which, *ex hypothesi*, are responsible for the constitution of a complex subject of experience S that is not contained in m , then no facts about m , neither the physical-extrinsic nor the phenomenally intrinsic facts about the relations between the basic experiential subjects and their inner categorial constitution, can explain the existence of S . Contrary to, for example, the vector analysis of a physical force, it is not apparent how, out of many small subjects of experience and their mental states, a complex state of experience can be generated at all.¹⁰⁷

107 See also James (1950: 160): 'Where the elemental units are supposed to be feelings, the case is in no wise altered. Take a hundred of them, shuffle them and pack them as close together as you can (whatever that may mean); still each remains the same feeling it always ways, shut in its own skin, windowless, ignorant of what the other feelings are and mean. There would be a hundred-and-first feeling there, if, when a group or series of such feelings were set up, a consciousness *belonging to the group as such* should emerge. And this 101st feeling would be a totally new fact, the 100 original feelings might, by a curious physical law, be a signal for its creation, when they came together; but they would have no substantial identity with it, nor it with them, and one could never deduce the one from the others, or (in any intelligible sense) say that they evolved it.' See also Goff (2006: 58) and Göcke (2012a).

The only way to explain the existence of higher-level subjects of experience is, therefore, by recourse to the concept of emergent relations. But since weak emergence can be excluded, a theory of strong emergence is the only alternative. Some panpsychists argue, accordingly, that the existence of subjects of experience of complex phenomenal life emerges strongly from basic subjects of experience, even if no metaphysical or scientific principles can be stated that explain this relation.¹⁰⁸

Because, however, the strong emergence of complex experiential entities is as obscure as the strong emergence of intrinsic-categorical over extrinsic-dispositional properties, the panpsychist cannot appeal to strong emergence without undermining the justification for his own position, which has only led to the phenomenal life of the basic building blocks of reality.¹⁰⁹ Panpsychism should therefore be rejected.

13.4 Krause's panentheism and panpsychism

There are good arguments both for and against panpsychism. In what follows, I would like to show that the apparent antinomy of panpsychist thinking can be resolved when panpsychism, as discussed in the analytical philosophy of the mind, is integrated into the panentheistic thinking of Krause. Recourse to Krause in the course of the analysis of the panpsychism discussed in analytical philosophy is systematically obvious. Although, to my knowledge, Krause is not at all in this discussion. This is astonishing, for a glance at the panentheistic system of science of Krause shows quickly that a large proportion of the *topoi* that are presently discussed in the analytical panpsychism debate by recourse to Eddington, Russell, and James are also, to be found in Krause.

Firstly, Krause holds the thesis of physical structuralism. He starts from the causal closeness of the physical world, which for him is the world described by the natural sciences. As a transcendental philosopher, he

108 See Goff (2011: 135–36): '[The argument] has no concerns about the intelligibility of panpsychist emergentism, the view that fact about the existence and nature of high-level conscious subjects, as a matter of brute fact or natural law, arise from facts about the existence and nature of micro-physical conscious subjects.'

109 See Chalmers (2016) for an analysis of the combination problem, Goff (2016), Skrbina (2011) und Brüntrup (2016) for various attempted solutions.

assumes that the knowledge discovered by physics is established by the principle of sufficient reason. The principle of sufficient reason, however, exclusively leads to the natural scientific discovery of the dispositional structure of empirical reality. In this way, Krause places himself directly on the ground of the analytic panpsychism debate.

Secondly, Krause agrees that physical structuralism does not facilitate complete knowledge of the system of sciences, because it only explores the structure between different entities in empirical reality, and their dispositional properties, not their intrinsic nature. According to Krause, the intrinsic categorial nature of the thing as such cannot be attained by a methodology based on the principle of sufficient reason, since it is only the relations between things that are analysed. In this respect too, Krause agrees with the current debate, which is based on the insight that decisive elements of a complete metaphysical explanation of the being of the world cannot be grasped by structuralism. As Krause's pupil Schopenhauer (1969: 28) states that 'all science in the real sense, by which I understand systematic knowledge under the guidance of the principle of sufficient reason, can never reach a final goal or give an entirely satisfactory explanation. It never aims at the inmost nature of the world; it can never get beyond the representation; on the contrary, it really tells us nothing more than the relation of one representation to another.'

Third, Krause agrees with the panpsychist contention that there must be an intrinsic-categorial being behind the structured phenomena. For Krause, this insight into the intrinsic nature of reality cannot be forced as the conclusion of a chain of proof, but must be carried out by every subject of knowledge himself, in the form of immediate intuition. When this is done, it can be used as an element of a final foundation that turns physical structuralism into an all-embracing metaphysical theory. As Krause (1886: 9) says: 'If, therefore, there is knowledge of something which in an unlimited way is all that there is, this insight entails that this something is without a ground [*ohne Grund*]. Consequently, the insight into the nature and existence of this something is without a ground as well, it is unprovable and not in need of a proof. [...] If there is such an insight, it must be immediate and not mediated through any other insight or item of knowledge. And although not everyone will be able to obtain it without instruction, it must be possible to instruct every spirit to obtain this insight for themselves.'

Fourth, just as in the analytical debate, it is assumed that our immediate perception of our own phenomenal experience serves as an epistemically legitimate justification for the existence of an ontological carrier of the dispositional properties of physical reality. So Krause assumes that a direct, certain, intuition of one's own intrinsic-categorical nature is possible, and that knowledge of the intrinsic nature of empirical reality can be deduced from this direct, certain, knowledge. Without this perception of our own intrinsic nature, physical structuralism would remain only a metaphysical patchwork. As seen, Krause (1886: 66) argues that 'we can only become aware of other things in so far as these things are ourselves, and we are in these things ourselves.' Furthermore, 'we can make an inference to the beings outside us, under the form: as true as I am myself, as I observe myself, there is also this or that being' (Krause 1886: 75). Krause, in other words, argues that, through self-observation, we can use what is discovered as the true nature of the I to account for the ultimate ground of empirical reality.

Although Krause is in harmony with the central insights of contemporary analytical philosophy of mind, he spells out the panpsychist insights under panentheistic premises, transcendently. While panpsychism is generally understood as a position mediating between physicalism and dualism, since it determines both the physical and the mental as inseparable and fundamental features of the one reality, panentheism generally strives for a higher reconciliation of an atheistic pantheism, on which the universe itself is *causa sui*, and the ontological dualism of necessarily existing creator and contingent creation. To achieve the synthesis of pantheism and classical theism, panentheism interprets the being of the finite universe, in the monistic tradition, as an intrinsic constitutive part of the all-unity, which is conceived as absolutely infinite, and transposes the fundamental difference between the ground of being and the effect of being into the Absolute itself.

Transcendental panentheism, as presented by Krause, attempts to formulate the relation between empirical reality and the Absolute, epistemologically, as a metaphysical theory, by analysis of the immediately certain conditions of the possibility of any subjectivity. The decisive key to the possibility of this transcendental-philosophical location of empirical reality, in the Absolute, is the following insight of Krause's: in the intrinsic-categorical essence of one's own self, which is directly examined in intuition, the subject ascends to the recognition of the intrinsic categorical determination of the Absolute, and then descends back to the intrinsic-categorical determination of extrinsic-relational empirical reality which sustains physical structuralism.

Krause calls the Absolute Essence or *Orwesen*. For Krause, the Absolute is the one principle of being and knowledge of empirical reality that unites all transcendent and transcendental determinations in the unity of its essence. And precisely in this lies the key to solving the panpsychist *aporias*. Both arguments for panpsychism show that conscious experience is a necessary condition for the existence of reality. The argument from the homogeneity of cosmic evolution shows that conscious experience, as an intrinsic-categorical bearer of dispositional structures of being, must exist at every moment of the existence of the universe. The argument from intrinsic natures yields the conclusion that the dispositional structure, studied by physics, without conscious experience of microphysical reality, could have no concrete reality. Both arguments against panpsychism show that panpsychism, despite the necessity of phenomenal experience for any metaphysical foundation of physical structuralism, has serious problems with the concept of the subject of experience: the argument from the absurd multiplication of subjects of experience has shown that, under any panpsychistic premises, any arbitrary physical structure implies the existence of an independent subject of experience. While the combination problem has shown that the panpsychist can consistently assume a certain number of basic subjects of experience, but does not have the explanatory resources to explain the existence of subjects of complex phenomenal experience. Although, in panpsychism, on the one hand, conscious experience is necessary for the existence of reality, it cannot, on the other hand, explain how the necessary subjects of experience can be individuated, and go beyond the number of fundamental subjects of experience.

The solution to this antinomy suggested by transcendental pantheism is to maintain the fundamental validity of the arguments for panpsychism, but to re-read it, and to abandon the assumption that there are numerically distinct metaphysical subjects of experience. Within present analytical philosophy of the mind, the epistemological reference to the intrinsic-categorical essence of one's own existence constitutive of panpsychism is interpreted as meaning that it can only show the inner essence of each individual existence. Instead, it should be assumed pantheistically as showing truth beyond the inner essence of one's own existence, and, as a matter of fact, as a self-display of the intrinsic-categorical structure of the Absolute: the inner vision of the self shows more than the inner essence of one's own existence. It shows the inner structure of the absolute.

If the analytical panpsychist follows this argumentation, he leaves the two arguments against him at the expense of his abolition in transcendently motivated panentheism. For he then abandons the assumption that there is metaphysically more than one subject of experience: all the different mental qualities, following the panentheistic interpretation of panpsychism, would be characteristics of the only existential subject of experience: the Absolute.¹¹⁰

This conclusion might evoke *prima facie* similar amused reactions as panpsychism. But *secunda facie* it is quite an attractive theoretical option, because the physical sciences show us the image of a causally closed universe, and because the panpsychist may explain the reality of the individual relations of any dispositional structure, but not why they together constitute a coherent and harmonious reality. The panentheist can explain this by analogy to our pre-critical experience of diachronic identity as follows: just as the assumption that there is a bearer of my conscious life enables me to see a unity and identity in my life, so empirical reality requires the existence of a single bearer to explain its own ontological unity.¹¹¹ Expressed in modern terms, the mental and the physical come into one.

13.5 Summary

Krause is again at the height of the current discussion, because what is discussed again today is already found in his system: ‘At the terminus of one of the branching lines of natural hierarchies of complexity stands the human person – the complex of the human-brain-in-the-human-body-society. Persons can have intentions and purposes that can be implemented by particular bodily actions. Indeed, the action of the body as a whole in its

110 Cf. Brüntrup (2011a: 39–40).

111 A central argument that seems to speak against the developed thesis is based on the premise that our phenomenal experience is a single stream of consciousness, and that we cannot have an epistemological approach to phenomenal experience that is not our own phenomenal experience. In other words, we always have only phenomenal access to our own consciousness, and no phenomenal evidence that this consciousness is part of a higher consciousness. This argument is a purely epistemological argument, and does not lead to a metaphysical conclusion that shows that it is not the case that our phenomenal experience is, at the same time part of a broader, phenomenal life. See Sprigge (2006) 485–86). See also Jaskolla/Buck (2012), Göcke (2014), and Zagzebski (2013) for analyses of holism and the concept of omni-subjectivity.

multiple levels just is the intended action of the person. The physical action is describable, at the bodily level, in terms of the appropriate physiology, anatomy, etc. but it also expresses the intentions and purposes of the person's thinking. *The physical and the mental are two levels of the same holistic psychosomatic event* (Peacocke 2004: 150).

Let us assume this argument is logically valid. It would not be more than an argument *that* panpsychism is correct. The question as to *how* it is possible that panpsychism is correct would not thereby be answered. For the argument does not address the question how the unity of nature and reason, spiritual and material reality, is to be understood epistemologically and located ontologically. Krause can explain and deduce in his system the necessity of this unity of opposites intuited in Orwesen. Krause can therefore be made systematically fruitful for today's discussion. For Krause, panpsychism is justified by panentheism.

