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Modes

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Synonyms

Modification

Related Topics

Accidents
Attributes
Distinctions (theories of)
Essence
Extension
Inherence
Location
Material substance (unity of)
Substance

Introduction

Modes are central items in the early modern ontology and are usually defined as “affections” of a subject, in which they inhere on which they essentially depend. In a very broad way then a mode denotes a way something is and in this sense a mode corresponds to a property of an object. Modes are particular properties and, being essentially dependent on their subject, they are also non-shareable. More specifically yet, according to a majority of authors modes denote a proper subclass of these properties, namely the variable or accidental properties of things. *Prima facie*, modes seem to coincide with the accidents of the Aristotelian tradition. But there are significant differences between accidents and modes. One crucial difference concerns the relation accidents and modes have to their subject. Accidents “add” something new to their subject and external to its essence, as for instance the accident of whiteness adds color to a wall which would otherwise be colorless. By contrast, modes “modify” objects, that is, they

determine it, as for instance a single piece of clay can be determined by the various shapes it can take. This can be understood as the relation of a determinate to a determinable. While there is a relative consensus on this way of characterizing modes as determiners of substances, their emergence as an ontological category is a complex story and their ontological status and their role varies among different metaphysicians.

Modes: their ontological status and their metaphysical functions

a) Modes in late scholastic ontology

By the end of the sixteenth century, the concept of mode appeared as a new item within the basic Aristotelian ontological division of being into substance [CROSS REFERENCE SUBSTANCE] and accident. In the course of his critical remarks on Spinoza's metaphysics in his *Dictionary*, Pierre Bayle [CROSS REFERENCE BAYLE] presents a narrative of why mode-talks came to replace accident-talk. According to Bayle, the later scholastics replaced the genuinely Aristotelian account of accidents with real accidents, as a result of the dogma of Transubstantiation. But real accidents were incompatible with the new corpuscular philosophy. The name "mode" eventually came to be used to refer to what earlier Aristotelians understood by accident so as to avoid possible confusions with real accidents (Bayle 1965: 331-32). Although partly correct, Bayle's narrative fails to capture some differences between Aristotelian accidents and modes.

The basic objects, for instance trees, cats, human beings, or gold nuggets are substances which are defined as self-subsisting subjects of accidents. Substances are the bearers of accidents or accidental forms. For instance, snow is white because it has the accident of whiteness, which belongs to the category of quality. Prior to the fourteenth century, the dominant view held that accidents have no reality of their own, and are just the ways a substance is. By contrast, later scholastics like Duns Scotus tended to defend the realist view that accidents are entities in their own right. This corresponds to the so-called doctrine of "real accidents" (for more on medieval debates about the reality of accidents, see Normore 2010 and Pasnau 2011: ch.10-12). One of the main arguments for the reality of accidents is their causal efficacy. Such views were fostered by the theological concern of explaining the Eucharist, and the dogma of transubstantiation, codified in 1551 by the Council of Trent. The latter entails the persistence of the "species", i.e. the accidents, of bread and wine (their color, taste, etc.) after consecration without inhering in any substance. According to such views, real accidents do not essentially inhere in substances – and this actually happens in the miracle of the Eucharist – but they are naturally inclined to inhere in substances. That is, real accidents have their own reality, their own essence and actual existence. Their inherence in a substance is naturally, but not absolutely necessary. Real accidents are thus really distinct from substances, i.e. as two distinct things or *res*. Their mutual separability is a sign of their real distinction.

Along with the real distinction, the scholastics usually recognized a conceptual distinction (*distinctio rationis*), which corresponds to a distinction in our different ways of conceiving the same things (a paradigm case is the distinction between the terms of an identity statement). But by the end of the sixteenth century, some Jesuits [CROSS REFERENCE JESUITS], most notably Pedro da Fonseca (1528-1599) and Francisco Suárez (1547-1614) added a novel distinction, a "modal" distinction which concerns items that are not things, but ways (modes) in which things exist (Menn 1997 and Pasnau 2009: ch.13). Admittedly, Fonseca was not the first to talk of modes and Aquinas described items in the accidental categories as ways of being (*modi essendi*). But there was no settled use of the word nor any attempt to provide a systematic analysis. Suárez plays a decisive role by highlighting their role and by conceiving modes realistically as entities, which are neither things nor ways of conceiving things in his *Disputationes*

metaphysicæ, published in 1597 (Pasnau 2011: 246). Modes are defined as dependent entities, by contrast with things. This comes with a nonmutual separability: a mode modifies a thing which can exist without this mode, whereas the latter cannot exist separately (Disp. Met. VII.2.8). Despite their dependency, modes are mind-independent, real entities, which is shown by the fact that they modify their subjects and do not merely supervene on them (Disp. Met. VII.1.17). Suárez adds two further features of modes: they are particular and variable, thus no essential property can be a mode. Modes come in various kinds and Suárez mentions all the following items as examples of modes: the inherence of an accident in a substance; the union of substantial form with matter; the location and local motion of a substance; the shape of an extended body; the action of a cause, for instance the light emitted by the sun.

Modes play a double role. First, they serve as determinates of substances and accidents. This as a consequence of the imperfection of creatures, which, as imperfect beings, are partially indeterminate and need to be completed by modes. Without its modes, a material substance would be shapeless and lack a determinate location. Hence there is a kind of dependence of substances on their modes, although this dependence is weaker: a body needs to have some shape or other, but not this or that shape (Pasnau 2011: 272-73).

The taxonomy of modes includes inherence and union and this illustrates another function of modes. A bronze sphere is a material substance. Its quantity, i.e. its size and volume, is a real accident distinct from it and inhering in it. The accident needs to be modified by the mode of inherence in order to ground the fact that this bronze sphere has this quantity. The union of matter with a substantial form, which is required for a material substance to exist, is another case. Suárez emphasizes that this union does not supervene on the mere existence of matter and form, nor on their co-location, but requires a mode of union, which has form as its subject (Disp. Met. XXXVI.3; XIII.9.13; XV.3.11; Anfray 2019; Perler 2020; Schmaltz 2020: 53-59). As one commentator aptly says, modes thus serve as the “cement of the universe” (Schmaltz 2020: 47).

Before leaving these late scholastic accounts of modes, three further consequences should be noted. First, modes directly modify their subjects and do not strictly inhere (Disp. Met. VII.1.19). This clearly results from the fact that inherence is itself a mode. Further, no mode can modify another mode, so that modes of modes are impossible. Finally, the introduction of modes introduces a difference of status among the nine accidental categories. Real accidents include accidents from the categories of quality and quantity. Passion, time (*Quando*), having and position (*Situs*) are extrinsic accidents. Finally, the categories of action, place (*Ubi*) and some relations (e.g. similarity) correspond to modes (Disp. Met. XVI.1.3, ref.). Therefore, only some accidents are modes and real accidents thus continue to play a central role.

b) The heyday of modes: Descartes

The notion of mode quickly spread after Suárez, outside Jesuit metaphysics, especially in Calvinist countries, where the theological context – the rejection of transubstantiation – offered no incentive to defend real accidents. Modes also spread outside scholastic circles, among the *novatores*. David Gorlæus (1591-1612) for instance maintains that, apart from a few real qualities, all other accidents are mere modes, which he understands reductively as ways a substance is. Gassendi [CROSS REFERENCE GASSENDI] on the other hand goes in the opposite direction and considers modes as non-substantial things. Thus both deflationism and realism were available to the new philosophers as ontological accounts of modes (Pasnau 2011: 259f; on Gorlæus as a channel to Descartes, see Hattab 2009).

But no philosopher played a more important part in the replacement of accidents by modes than Descartes [CROSS REFERENCE DESCARTES]. He is the first to build an ontology on the division between substance, attribute and mode (PP I.51-63). Each substance [CROSS REFERENCE

SUBSTANCE] has a principal attribute, which makes up its essence. There is an ontological bifurcation in two irreducible kinds of substances: minds and bodies or corporeal substance. Extension and thought are the principle attributes of body and mind. All other properties of a substance are modes or modification of this attribute. The principal modes of corporeal substance are shape and motion. Intellectual perceptions, sensations and volitions are modes of thought, i.e. particular determinations of the attribute of thought. Like modes, attributes are in substances and depend on them. But attributes are only conceptually distinct from their substance and are invariable, whereas modes are variable and modally distinct from substance.

Descartes embraced modes in his ontology as a consequence of his rejection of real accidents. One of his arguments against such accidents, with respect to the corporeal world, is that they are explanatory idle. Scholastic authors postulated real accidents when they thought some change could not be explained by the rearrangement of substances and their parts. By contrast, Descartes's corpuscular view reduces all changes in bodies to the motion and rearrangement of their parts (AT III.503). At bottom then, he does not need real accidents, but only modes, i.e. ways substances are disposed. What prevents him from reducing modes themselves is the idea that substances persist through change of their modes, as shown in the famous wax passage from *Meditation II* (AT VII.30-32). This entails that modes cannot be really identical with substances, otherwise a change of modes would entail that the substance does not persist. Mental states represent a further obstacle to the reduction of modes to substances because in virtue of the mind's indivisibility its different states cannot arise from the various arrangement of its parts, but involves something more, namely a mode of thought.

Cartesian modes share many features with Suárezian modes. First, they are dependent entities that cannot be distinctly conceived without their substance, whereas a substance can be distinctly conceived without a mode (PP I.61). Second, modes determine their substances: for instance, a piece of wax is arguably a substance, identical with a given spatial volume; this piece of wax must have some shape or other. Similarly, although essentially thinking, any mind must have some determinate thought at any time. Third, Descartes holds that reality comes in degrees and includes not only substances but also modes, which have existence (AT VII.40; VII.185). Modes are thus mind-independent. Finally, Descartes holds that modes belonging to a single substance are modally distinct, while modes belonging to distinct substances are really distinct (PP I.61). This claim has far reaching consequences. First, it precludes "straddling modes", i.e. modes simultaneously belonging to distinct substances. This raises some difficulties with respect to other claims. One such claim is the characterization of surface (e.g. the surface of a sphere) as a mode common to two contiguous bodies (e.g. the sphere itself and the ambient air, AT VII.433-34). Another problematic case is the account of action and passion as "une mesme chose" considered either in the agent or in the patient (AT XI.328). The real distinction of modes pertaining to distinct substances also entails that motion considered as a mode of the moving body cannot literally be transferred to another after collision. This impossibility puts constraints on the causality at work among bodies (AT V.404, cf. VIIIa.66).

But there are also significant discrepancies with Suárezian modes. To mention but three, modes are causally efficacious, as is shown by the fact that motion is a mode, as well as the forces involved in motion [CROSS REFERENCE Descartes, *Mathematics and the Science of Motion*] (the latter point is controversial, for opposing views see Garber 1992 and Schmaltz 2008). In addition, Descartes admits that modes can be modified by other modes. Thus, in a moving body, motion proper is distinct from its determination, the direction of movement. A body whose motion is reflected by collision maintains its motion while changing its direction. Motion is a mode of the body, while its determination is a mode of motion. Finally, Descartes collapses the distinction between modifying a subject and inhering in a subject. Hence, against Suárez, the notion of a mode of inherence is meaningless within the Cartesian ontology.

After Descartes, talk of modes, *modi* in Latin, *modifications* or *modalitez* in French, became standard among the Cartesians, with realism as a dominant tendency from Clauberg who distinguishes merely mental modes from real modes (Clauberg 1691: 290), to Malebranche who claims that reality is divided in beings and modes of beings (Malebranche 1997: 244). Arnauld and Nicole's definition of modes as dependent on things and determining them is not original. But they also develop a suggestion from Descartes by introducing the idea of substantial modes, as for instance being clothed, where a cloth (which is a substance) is predicated of a human being (another substance). But substantial modes are not modes *simpliciter* (Arnauld and Nicole 1996 §1.2).

c) Spinoza on modes

Spinoza [CROSS REFERENCE SPINOZA] is another major author who was influenced by Descartes's ontology of modes, but his own account of the relation between substance and modes is complex and has given rise to much controversy among commentators. At the outset of the *Ethics*, Spinoza offers the following definition of a mode: "By mode I understand the affections of a substance, or that which is in another through which it is also conceived." (*Ethics* 1def5 in Spinoza 1985: 409). This definition includes both an inherence conditions (a mode "is in another") and a conceptual condition (a mode "is conceived" through another). This immediately raises the question of how these two conditions are related. Commentators disagree: according to some recent scholars, the conceptual condition is the more fundamental (Della Rocca 2008: 41-47), whereas inherence remains fundamental according to the traditional line of interpretation (Carriero 1991; Garrett 2002; Schmaltz 2020; Melamed 2013). There is a complex interplay between an interpretation of Spinoza's definition of mode and the kinds of items that count as modes. Spinoza endorses monism: reality comprises a single substance, God or Nature, and all particular things are merely modes of this substance, mental modes under the attribute of thought, bodily modes under the attribute of extension. Substance monism coupled with the view that modes are properties entails that finite things are properties inhering in the one substance. This is a strange thesis at first sight, with odd consequences, and for this reason some commentators have suggested an alternative reading where modes causally depend on substance without inhering in it (Curley 1969:18). Yet this causal account of modes ignores the fact that modes are first characterized as *affections*, a term synonymous with quality or property; it also runs counter to the Cartesian inheritance of the definition of modes, and it is incompatible with pantheism (Melamed 2013). Thus, even if Spinoza and Descartes start from similar definition of modes, their overall account are markedly different. For Descartes, particular things are neither modes nor bundles of modes. Spinoza on the contrary holds both that modes are properties of God and that all finite things are bundles of modes, which are thus akin with the tropes of contemporary metaphysicians (Melamed 2013; Williams 1997).

There is another peculiarity in Spinoza's view of modes, viz. his notion of "infinite modes". Infinite modes are introduced in the *Ethics* as a link between God's eternal and infinite existence and the finite and durational existence of modes. Finite modes can be determined to exist only by other finite things (*Ethics* 1p28). It is not possible to deduce the existence of any finite mode from God's essence. But Spinoza postulates infinite modes that do follow from God's absolute nature (*Ethics* 1p21). In addition to the infinite modes following immediately from God's attributes, there are other mediate infinite modes that are deduced from these attributes in conjunction with the immediate infinite modes (*Ethics* 1p22). An essential feature of infinite modes is their permanence. Moreover, all modes exist necessarily. This shows that inherence becomes the only defining feature of modes in Spinoza's ontology.

Beyond their structural role and this purely formal characterization, Spinoza leaves the reader with little explanation of what infinite modes are. As examples of immediate infinite modes, he mentions the idea of God for the attribute of thought and "motion and rest" as the corresponding immediate infinite

mode of extension. In a letter to a correspondent, he suggests the “face of the whole universe” (*facies totius universi*) as an example of a mediate infinite mode (Letter 64 in Spinoza 2016: 438). One popular interpretation identifies infinite modes with the laws of nature (Curley 1969: 54-79). But a more correct interpretation understands them as concrete, pervasive features of reality, as for instance the conserved quantities of motion and rest (Schmaltz 2020).

d) Some later developments and the slow decline of modes

Against Spinoza’s view that finite things are modes of God, Leibniz [CROSS REFERENCE LEIBNIZ] holds that only substances persist through change, and that modes do not endure. Finite things would thus be “vanishing modifications” (Leibniz 1989: 277). Leibniz used this line of argument against occasionalism [CROSS REFERENCE OCCASIONALISM]. By depriving finite things from their causal powers, occasionalism entails that they are modifications deprived of persistence (Leibniz 1989: 160). Successiveness and lack of permanence are essential characteristics of modes according to Leibniz. Like Descartes, he rejects real accidents and accepts only modifications and emphasizes their status as limitations, just as shape limits extension (Leibniz 1989: 180). He does not think that conceptual dependence is sufficient to define modes and prefers to insist on their inherence.

Another aspect of the Cartesian account of modes to which Leibniz gives prominence is the fact that every mode of a substance derives from its nature or essential attributes. But he frames it as a requirement that all modifications be explained in terms of the thing’s nature. This principle is crucial in Leibniz’s refutation of Locke’s hypothesis of thinking matter, since thought cannot be understood as an intelligible modification of extended matter (Leibniz 1981: 66-67).

The fact that “modifications limit rather than increase or add” (Leibniz 1989: 169) naturally raises the issue of the ontological status of modes. Here there is a shift in Leibniz’s position. In his early years, his professed nominalism led him to deny the reality of accidents altogether and to reduce modes to ways substances are, i.e. to what can be truly predicated of substances (Rauzy 2001; Di Bella 2005). But after 1690, his opposition to the sort of strongly reductionist accounts of modes that one may find in Bayle leads him to grant mode some reality within substance (Anfray 2018). This issue is connected with the distinction between primitive and derivative forces, the latter being the forces manifested in bodies and studied by the physicists, like the motive force measured by mv^2 , which is conserved in collision among bodies [CROSS REFERENCE LEIBNIZ]. Such forces are defined as modifications of the primitive force. This identification of derivative forces with modifications of substances raises many interpretive issues, in particular the identification of the subject of derivative forces (Adams 1994: 378-393). In his late correspondence with Des Bosses, Leibniz seems to envisage derivative forces as modifications, not of monads, but of a composite substance, the so-called ‘substantial bond’ (*vinculum substantiale*).

At the turn the 17th and 18th centuries, there is thus a relative consensus with regard to the definition of modes or at least the fact that they designate what inheres in and depends on substances and debates turn mainly on issues like the ontological status of modes and the kind of entities picked up by the notion of mode. In this respect, Locke’s [CROSS REFERENCE LOCKE] account of modes is partly traditional and partly idiosyncratic. Admittedly, his definition of “our ideas of modes” looks rather common, although it tends to conflate modes and ideas of modes: “Modes I call such complex ideas which, however compounded, contain not in them the supposition of subsisting by themselves, but are considered as dependences on, or affections of substances” (*Essay* II xii §3). As “affections of substances”, Lockean modes seem to correspond to the variable, individual properties of the established use of “modes”. And what he calls simple modes (geometric figures, numbers, durations) are determinates of a single determinable dimension while their ideas are formed by modifying ideas of the same kind. But Locke also introduces “mixed modes”, whose ideas are formed from combinations of

ideas of different kinds. Gratitude, beauty, a stabbing or a military victory are among Locke's favorite examples of mixed modes. From the nature of these examples, it appears that mixed modes denote actions, events or social institutions, and not (at least *prima facie*) properties of things. Another crucial feature of mixed modes is that their existence partly depends on human conventions, because their ideas are formed arbitrarily and do not correspond to independent patterns in nature (Stuart 2013).

With the decay of scholasticism, the interest in modes tends to wane during the eighteenth century. Berkeley and Hume relegate substances as well as modes to mere collections of ideas (See Berkeley, *Treatise concerning the Principles of Human Knowledge* I, §49; Hume, *Treatise of Human Nature* 1.1.6.2). While modes tend to be dismissed among empiricist-oriented thinkers, they are still part of rationalist ontology. Christian Wolff [CROSS REFERENCE WOLFF] presents in his *Philosophia prima sive Ontologia* a tripartition of the "determinations" of things: *essentialia*, attributes and modes. *Essentialia* are the elements of a thing's essence, and are identified by Wolff with the thing itself. Attributes are necessary properties, and modes are contingent properties. Modes depend on the essential properties of a thing, but are not entailed by them. A thing's essence is therefore indeterminate with respect to its modes. An original aspect of Wolff's account resides in the distinction between a mode and the possibility of a mode. Thus, motion in a body is a mode, and the body's mobility is a "proximate possibility" for the motion, whose actual presence is caused by something external to the substance. Such a proximate possibility is indeed an attribute (Wolff 1730, §249-52; Hettche and Cory 2019; Effertz 2018: 144-46). As a witness of Wolff's influence outside Germany, the anonymous entry "Mode" in the *Encyclopédie* takes on his account (Diderot and D'Alembert 1765: 590-91). Alexander Baumgarten (1714-1762) also endorses Wolff's tripartition of essentials, attributes and modes and defines existence as a mode of an object and its complete determination (Baumgarten 1757, §55). Kant has still a place for the notions of determination and accident, but modes almost disappear. Here we have come full circle and retrieve the idea that modes are basically determinates or completers of things, at a time when the term "mode" quietly fades away from the philosophical discourse.

Cross-References

Descartes

Jesuits

Leibniz

Locke

Occasionalism: Causation and Divine Action in Early Modern Philosophy and Science

Ontology

Spinoza

Substance

Wolff

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