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Author	Family Name	<b>Klima</b>
	Particle	
	Given Name	<b>Gyula</b>
	Suffix	
	Division	Department of Philosophy
	Organization	Fordham University
	Address	441 E. Fordham Road, New York, NY, 10458, USA
	Email	gklima@optonline.net; klima@fordham.edu

# J

## John Buridan

GYULA KLIMA  
Department of Philosophy  
Fordham University  
New York, NY 10458  
USA

### Abstract

John Buridan (ca. 1300–1362) was “the great systematizer and legitimizer” of Ockhamist nominalism at the University of Paris in the first half of the fourteenth century. His ideas proved to have a lasting influence for centuries in all philosophical disciplines, not only directly, through his own works, but also indirectly, by becoming standard textbook material.

### Life, Influence, and Works

Buridan was born around 1300 somewhere in the diocese of Arras, in Picardy. He was probably of humble birth, which is indicated by the fact that we have no reliable record of his family, and by the circumstance that at the College of Cardinal Lemoine, where he completed his early education, he may have been a recipient of a stipend for needy students. If this is in fact the case, then his career is a testimony to the possibility of upward social mobility in medieval academia through talent and hard work alone. He obtained his license to teach after 1320 at the Arts Faculty of the University of Paris, where he remained teaching for the rest of his life. The fact that he did not follow the usual career path of professors of his time, moving on to one of the “higher” Faculties of Medicine, Law, or Theology, may indicate a prudent choice on his part: staying at the Arts Faculty, he could work relatively undisturbed on his “quiet nominalist revolution,” without getting embroiled in the “ideologically charged” controversies of the Faculty of Theology. In any case, staying at the Faculty of Arts certainly did not hurt his professional stature. He served twice as rector of the university, and lived unusually well off for a university professor of his time, drawing income from at least three

benefices till his death, sometime before 1362, when one of his benefices went to another person.

Buridan’s students and professional associates at Paris spread his ideas far and wide in Europe. (All this, however, need not mean that talk about a doctrinally homogenous “School of Buridan” at Paris is justified: see Thijssen 2004.) But besides his enormous indirect influence, we should note that his works themselves, both in manuscripts and later in early printed editions, became required reading at many “new” universities, such as Vienna, Prague, Krakow, Rostock, and Saint Andrews.

Buridan’s works are mostly the by-products of his teaching. As such, they mainly consist of commentaries on Aristotle, covering the entire Aristotelian corpus, ranging from logic to natural philosophy (including physics, biology, and the philosophy of the soul), to metaphysics, and to practical philosophy, including ethics and politics. Among the commentaries, there are running commentaries expounding Aristotle’s texts, but the more significant ones, where his originality shines, are the question commentaries (fitting in the established medieval genre), which, instead of merely expounding the author’s text, provide the opportunity of thorough discussion of the problems raised by the text. In fact, the commentary format suited his style so well that he wrote even his most original, systematic work, *Summulae de Dialectica* (see Buridan 2001) in the form of a running commentary on an authoritative text, in this case, the enormously influential *Summulae Logicales* (or simply *Tractatus*) of Peter of Spain (see Peter of Spain 1972). Besides his major works, he produced a number of short treatises, the most important and original of which is the *Treatise on Consequences*, expounding his original, nominalist conception of logical validity. (For a detailed discussion of his genuinely original conception, see Klima 2009, ca. 10; for more on his life and an excellent, historically “contextualized” discussion of his work, see Zupko 2003.)

### Logic

In medieval philosophy, logic was commonly regarded as a foundational philosophical discipline, as the universal intellectual tool (*organon*) to be used in all areas of inquiry (the “art of arts”, *ars artium*; cf. Klima 1988:1–17), but it is

particularly important for the nominalist Buridan, in whose hands it serves as the main analytical instrument in the nominalist program of “ontological reduction.” For Ockhamist nominalism does not merely consist in the denial of the existence of Platonic universals (which were generally rejected in the later medieval period for both philosophical and theological reasons anyway; see Klima 2008), but rather in the careful articulation of a semantic theory that allows the mapping of the category-rich syntactical structures of our language to a parsimoniously conceived ontology, containing only two or three distinct categories of entities. Thus, what is truly antithetical to Ockham’s or Buridan’s nominalism, is not so much Platonic “extreme” realism, but rather the “linguistic realism” of thirteenth-century modists (cf. *modistae*; Ebbesen 1998; Marmo 1999; Zupko 2008), and in general anyone before Ockham working in a conceptual framework endorsing the view that linguistic differences have to have some (more or less strictly) corresponding ontological differences, or else they are “vacuous” (cf. Scotus, Ord. II, d. 3, part 1, q. 1, n. 23; Spade 1994:62).

However, in Buridan’s hand, the Ockhamist project of “ontological reduction” is no longer some controversial innovation bolstered by an equally controversial reinterpretation of much of contemporary logical theory, as it was initiated by Ockham, but rather a systematic implementation of Ockham’s logical principles, showing a consistent alternative way of constructing logical theory *without* the ontological commitments of realist logic. Perhaps the best indication of this attitude is that in his *Summulae*, rather than confronting the doctrines of the realist master he was supposedly commenting on, he simply replaced passages of Peter of Spain he did not like with his own text, and in the commentary expounded his own nominalist doctrine without further ado:

- ▶ I have chosen to deal in particular with that short treatise of logic which the venerable professor master Peter of Spain composed a while ago, by commenting on and supplementing it; indeed, occasionally I am going to have to say and write things that differ from what he has said and written, whenever it appears to me suitable to do so. (Buridan 2001:4.)

To see exactly how Buridan carried out the nominalist program of ontological reduction through logical analysis, it will be useful to see what was there in the competing realist theories “to be reduced” in the first place. Ockham often complains that his realist opponents “multiply entities according to the multiplicity of names” and this is an error that stems from an “ignorance of logic” (for detailed discussion, see Klima 1999a). Actually, Ockham’s charges

were not quite justified. In the first place, realist authors did allow the possibility of identifying the semantic values of different expressions from different linguistic categories. In the second place, even when they did need to recognize such semantic values as distinct, sometimes they reduced the ontological commitment of their theory by attributing these semantic values a sort of “reduced ontological status,” by claiming, for instance, that they are mere beings of reason [*entia rationis*], that is, not full-fledged entities on their own, but rather just mere objects of the mind with some “foundation in reality” [*fundamentum in re*], a certain way real things are. (See the entry Being in this volume.)

It is true, however, that as far as their *semantics* is concerned, the *moderni* criticized by Ockham simply did not seem to care about the apparent “multiplication of entities”: their strategy rather seems to have been to assign semantic values to linguistic items as their apparent semantic function demanded, and took it to be a different task, a task of metaphysics, to find out about the identity and distinctness and the precise ontological status of each item. Thus, for instance, we find Peter of Spain distinguishing between the sort of entities or quasi-entities demanded by logic [*secundum viam logicae*] and those that there really exist in nature [*secundum viam naturae*] (Peter of Spain 1972:87). And even if he does not seem to have an extraordinary ontology *secundum viam naturae*, he has no qualms about populating his universe of discourse with universals, inherent particulars, or quasi-particulars including privations (such as blindness), or even their modes allegedly signified by syncategorematic terms, and the quasi-entities signified by propositions (which he refers to as *enuntiabilia*, and we would probably identify as “states of affairs”) *secundum viam logicae*.

It was this sort of approach that was rejected and swept aside by Ockham, proposing a radically different way of constructing semantic theory, brought to fruition especially by Buridan in his *Summulae*. This alternative way of constructing semantic theory rejects in the first place the “cavalier” metaphysical attitude in logic. On this approach, the assigning of semantic values in logical theory is ontologically cautious from the start, where the logician posits distinct ontological categories only when this is demanded for compelling reasons that settle the issue already in logic. Otherwise, the logician has the task of eliminating apparent ontological commitment to distinct entities through logical analysis, whenever this is possible. The mere possibility of this type of analysis, then, in line with “Ockham’s Razor,” is sufficient reason for the nominalist logician not to posit a distinct category

of entities. To see this in more detail, let us take a closer look at how exactly Buridan manages to provide a semantic theory with an ontology that contains only three distinct categories of entities, namely, substances, their individualized, inherent quantities (such as length, weight, etc.), and some inherent individual qualities (such as color, heat, etc.).

Buridan's primary analytic tool to this end (partly borrowed from Ockham, partly further developed by himself) is the analysis of semantic distinctions with reference to *mental language*, the natural representational system of the human mind, providing the semantic features of the conventionally meaningful spoken and written human languages.

Although for Buridan mental language is the system of intellectual cognitive acts of individual human minds, it is definitely not to be regarded as a "private language" in the sense criticized by Wittgenstein. For mental language, being the *natural* representational system of *any* individual human mind is common for all humans in the sense that if I have an intellectual cognitive act, a *concept*, whereby I conceive of something in some way, then you, being another human person, have the natural ability to form a *similar concept*, that is, a numerically distinct mental act whereby you conceive of the same things in the same way. For obviously, and this is the key idea of using the idea of a mental language for a nominalist ontological reduction, the same things can be conceived in many different ways, depending on what sorts of concepts we form to conceive of them.

Buridan distinguishes simple and complex concepts. In connection with this distinction, it is important to note that since for him any concept is an ontologically simple entity, a simple individualized quality of an individual mind, not having any ontological components, the complexity of complex concepts is not ontological or syntactical (in the way a written sentence has ontologically and syntactically distinct components), but purely semantic. A concept in this sense is semantically complex if its representative function is dependent on the representative function of other concepts, whereas it is simple otherwise. In this way, subsuming all human concepts under the category of quality, Buridan (and Ockham, in his mature theory) at once eliminated the ontologically obscure category of "merely objective" concepts that Ockham in his early theory referred to as *ficta*. Concepts on this account are ontologically no more obscure entities than are colors, for instance, for both concepts and colors are simple individualized qualities of individual substances (see Buridan 2001:xxxviii–xxxix).

Simple concepts are either categorematic or syncategorematic. Syncategorematic concepts are "the glue" of mental language; in fact, Buridan often refers to them as "complexive" concepts, that is, concepts whose function is not to represent *per se*, but rather to form complex concepts, thereby modifying the natural, *per se* representative function of categorematic concepts. Thus, he argues, although by every concept we conceive something, by complexive concepts we do not conceive anything other than what we conceive of by the categorematic concepts with which they are construed, although we do conceive of these things *differently*, in a complex, rather than in a simple manner:

- ▶ But now there is a difficult question, for it was said earlier that by every concept something is conceived. What then is conceived by the complexive concept corresponding to the copula "is", when I say "God is God" or "A man is a stone?"
- ▶ I reply that ... since the intellect cannot form that complexive concept without the categorematic concepts that it combines, nothing is conceived by that concept alone. But we conceive the very same things in a complex manner by means of the categorematic concepts as those that were conceived in an incomplex manner by those categorematic terms without that complexive concept. Therefore, different things are not conceived by the concepts corresponding to the various expressions "God is God", "God is not God", "Every God is God", "No God is God" and to the term "God"; rather, that thing is conceived in different ways, namely, in a complex or incomplex manner, and affirmatively or negatively. So, coming back to the solution of the sophism, I say that although the expression "God is God" signifies more in the mind than the name "God", nevertheless, it signifies nothing more outside [the mind], but entirely the same [thing], although in a different manner. (Buridan 2001:842–843.)

Here, we can clearly see Buridan's nominalist "ontological reduction" at work. The very same simple, absolutely indivisible entity, God, can be conceived in so many different ways, by means of the different sorts of concepts we form of Him.

Likewise, any other entities can be conceived of either in a complex manner, by means of complex concepts, or in a simple manner, by means of simple concepts, either absolutely, in terms of *absolute concepts*, or in relation to each other, in terms of *connotative concepts*. Thus, according to Buridan, whenever we have a term in our language that belongs to a linguistic category other than to the categories of substance, quantity, or quality, we should

not suppose that consequently we must place the semantic values of that term in an ontological category other than substance, quantity, or quality: all we need to do is analyze the meaning of the term by means of a nominal definition that clearly explicates the conceptual structure of the complex concept to which this term is subordinated. This analysis should then reveal that the term in question merely signifies or connotes entities in the three “permitted” categories. (For a thorough discussion of Buridan’s conception of mental language and its role in his ontological program, see Klima 2009, c. 4.)

For example, the nominal definition of the term “blind” as “animal not having sight,” clearly reveals that the complex concept that renders the term “blind” meaningful merely signifies animals (substances), connoting their sights (qualities), but on account of connoting their sights negatively (because of the added syncategorematic concept of negation), in the context of a proposition it will only refer to (or “supposit for” to use the common English transcription of the medieval technical term *supponit pro*) animals that actually do not have sight. What this analysis reveals, then, is that the term “blind” does not have to be construed as signifying a mysterious “quasi-entity,” a privation (as the common prenominalist analysis suggested, see Klima 1993), for its meaning is fully explained only with reference to ordinary entities, namely, animals, their sights, and the qualities of our minds, namely, the concepts whereby we can conceive of animals with a negative connotation of their sights.

In fact, this nominalist strategy of “ontological reduction through logical analysis” is so successful that one may wonder why it is not carried even further. Why allow even the distinct categories of quality and quantity? After all, Ockham could do without a distinct category of quantity (having identified the semantic values of quantity terms with entities in the category of substance or quality), and even his analyses could in principle be carried further by “analyzing away” the distinct semantic values of quality terms, as Buridan himself did with quality terms in the species of “shape” (*figura*) (see Klima 1999b, and the entry Substance, Accident and Modes in this volume). So why would Buridan allow even the distinct ontological categories of quantity and quality? The answer to this question is to be found not in his logic, but in his metaphysics.

### Metaphysics and Natural Philosophy

Both Ockham and Buridan had specific, nonlogical reasons for maintaining the distinct category of quality, namely, their rejection of atomism. For, in terms of the possibility of pure logical analysis, in an atomistic metaphysics, qualitative changes (such as changes of color, as

opposed to quantitative changes or locomotion) could have been “analyzed away” analogously to the elimination of changes in the species of “shape,” with reference to complex connotative concepts referring to and connoting only substances and the locomotion of their quantitative parts. However, Buridan partly convinced by Aristotle’s arguments against the ancient atomists, partly seeing the troubles incurred by contemporary atomists, such as John Mirecourt and Nicholas Autrecourt, flatly rejected atomism as “an obscure and dangerous doctrine,” and embraced the category of quality as containing individual entities distinct from substance and quantity (Buridan 1989:122).

Indeed, for similarly extralogical reasons, he departed even further from Ockham’s ontology. The most important of his “ontological departures” from Ockham can be summarized in the following points:

1. Acknowledging quantity as a category distinct from substance and quality, for purely physical reasons.
2. Positing *impetus* as a distinct quality to explain what we would describe as inertial phenomena.
3. Positing *modes* as somehow, but not really, distinct from (in the sense of being merely contingently identical with) the absolute categories of substance, quantity, and quality.
4. Positing intelligible species, but identifying them with phantasms *qua* the immediate objects of the agent intellect.
5. Endorsing the unicity of substantial forms, that is, denying the plurality of souls in the same individual, while distinguishing the (instrumental) powers, habits, and acts of the simple substance of the soul.
6. Positing different degrees of unity, ranging from simple substances through composite substances to merely persisting entities, such as rivers.

As for the first point, Buridan’s main reason for positing quantity as a distinct category, true to his Aristotelian empiricist approach to natural science, is that it seems to be necessary for the explanation of the phenomena of condensation and rarefaction in the framework of a non-atomistic, plenum theory. For in an atomistic theory, the explanation is easy in terms of the smaller or greater distance between the atoms of the body compressed or extended (which is precisely the idea in the modern kinetic theory of gases). But in a plenum theory (i.e., a theory of matter that denies the existence of a vacuum and holds that matter is a continuum), if there is no addition of matter to the substance of the thing (which is what distinguishes decompression or rarefaction from growth), then one has to say that while the substance remains the

same, its quantity (i.e., its dimensions) must become greater, which is possible only if the quantity of the thing is distinct from its substance.

But similar (experimental as well as theoretical) considerations motivate Buridan's positing a specific quality, namely, the *impetus* of moving bodies. His *impetus* is introduced, again, as a requisite explanatory principle. Given the principle of Aristotelian physics that everything that is in motion needs to be moved by a mover, phenomena that we would characterize as cases of inertial motion, such as the motion of projectiles, posed a problem: what moves, for example, an arrow shot from a bow, when it is no longer moved by the bowstring? Aristotle's answer, namely, that it is the air still moved by the bowstring, was heavily criticized already by his sixth-century commentator, Philoponus, who favored the view that it is some impressed force imparted to the projectile by its original mover that sustains its ongoing motion. However, it was Buridan who fully worked out the idea in his theory of *impetus*, viewed by many historians of science as a precursor of the modern notion of inertia, although in its actual description given by Buridan it is closer to the modern idea of momentum. His *impetus* is an impressed force (imparted to the moving body by its original mover, which brings it up to a certain speed), which is directly proportional to the speed of the moving body and to its heaviness (not quite the same as what in modern physics we would call "mass," but rather a heavy body's natural tendency to be "down," at the center of the earth), and which is not spontaneously diminished, but is only weakened by the resistance of the medium. The greatest virtue of this theory is its applicability to a whole range of diverse phenomena that were either puzzling or "anomalous" in themselves, such as projectile motion, and/or were treated as falling under radically different explanatory models in the original Aristotelian framework, such as the acceleration of falling bodies, the motion of projectiles, the ongoing rotation of a spinning wheel, and the motion of celestial bodies, thereby providing a coherent, unitary conceptual framework for all these diverse phenomena, serving as a model for the unification of earthly and celestial mechanics in early modern science.

But aside from such explicit theoretical demands of the explanation of phenomena, Buridan, being the "relentless" nominalist, was always reluctant to posit really distinct entities in diverse categories; thus, in the categories other than substance, quantity, and quality, as well as in the species of "shape" in the category quality, he consistently applied Ockham's eliminative strategy using nominal definitions containing absolute terms only in the "permitted" categories. Nevertheless, occasionally, he

does not refrain from referring to what terms in the other categories connote or signify as the modifications or *modes* (*modi*) of things in the "permitted" categories. Thus, he would admit without further ado, for example, that while the quantity of a straight piece of wire is arranged in one way, the same quantity is arranged in a different way, if the wire is bent, that is, the same quantity has some modification at one time, and a different one at another. However, although this way of speaking involves what in modern logic we would call "quantification over" different modes, he would not regard this as adding any extra ontological commitment to his theory. For although the *modus* of the quantity of the wire at one time is different from the *modus* it has at another time, each is contingently identical with the same quantity at different times, thereby not adding to the number of things in the universe at any given time. This conception of *modes*, as being somehow different, yet without being numerically distinct, from absolute entities, was to have a bright career in later medieval and early modern philosophy, at first just undermining and eventually completely replacing the Aristotelian distinction between substance and accident. (See also the entry Substance, Accidents, and Modes in this volume.)

But Buridan's nominalist zeal also had its impact in more specific fields, such as his philosophy of the soul. Thus, although he apparently endorsed intelligible and sensible species, already diligently eliminated by earlier philosophers and theologians, such as Durand of St Pourcain or John Peter Olivi, in favor of a direct relationship between cognitive acts and their objects, he would nevertheless identify sensible species with the first receptive acts of the external senses, and intelligible species with *phantasms* (singular, sensory representations of singulars), insofar as they are the indirect objects of the act of the abstractive intellect forming its abstract concept, a mental act whereby it directly conceives all of the corresponding external singulars of the same kind. Indeed, his ontological economy shows up not only in his analysis of the cognitive process, but also in the analysis of the constitution of the soul and its powers or functions, as expressed in point 5 above: contrary to Ockham and the "pluralist" tradition in general, he argued that there is only one substantial form, one soul, in the same living individual, which alone is capable of accounting for the diverse (vegetative, sensitive, and rational) functions of the same individual (plant, animal, or human, respectively), through the diverse instrumental powers it has, as it animates the diverse organs of the same living body (or uses no organ at all, as he held, though not as a provable philosophical conclusion, concerning the intellect). But while he

distinguished these “instrumental” powers from the soul itself, he also argued that the “principal” powers of the same soul (the essential abilities to carry out vegetative, sensitive, or rational functions) are nothing but the soul itself, denominated variously from its diverse operations.

Finally, we should mention Buridan’s rather original analysis of different conditions of identity and persistence through time relative to natural kinds, which apparently results in a conception that admits different degrees of unity relative to natural kinds (Buridan 1984, lb. 2, q. 7; Buridan 1509, lb. 1, q. 10). Still, this does not commit him to acknowledging anything like Aquinas’ conception of the analogy of unity and being, since for him, the conceptual order does not have to reflect the real order in such a close way as it was conceived by Aquinas (see Being).

### Ethics

Buridan’s ethical theory closely follows upon his naturalistic account of the human soul, insofar as he regards our psychological mechanisms involved in our moral decisions just as natural causal processes as those involved in the workings of any other natural agents, based on a range of natural powers, determined by the nature of the thing. In the case of moral agents, however, there is one power whose operation is not determined to one specific sort of outcome, as the powers of other natural agents are (fire, for instance, cannot but heat by its heat), because its proper operation consists precisely in determining the action of the moral agent as a whole, namely, the free will of a moral agent, acting by choice. As he puts it:

- ▶ This is the difference between a voluntary and non-voluntary agent, namely, that a voluntary agent can freely determine itself to either of two opposite alternatives, other things being entirely equal. (Buridan 1513, lb. 3, q. 1, fol. xxvi rb)

To be sure, for Buridan, this is not a demonstratively established conclusion (we do not have a scientific demonstration of the fact that our will is free), as neither is the fact that our intellect is immaterial and immortal, however, in contrast to the intellectual soul’s immortality, which we can only hold on the basis of faith, we may be sufficiently certain about our freedom, simply on the basis of the evident experience that we might also choose to act otherwise.

However, just because the operation of the will is not determined to one specific type of outcome, it does not mean that its action is indeterminate in the sense of being randomly spontaneous. The determination of the will, given that it is a rational power, has to come from the intellect, in the sense that as long as the intellect presents

different alternative courses of action in such a way that one is judged to be definitely better (more securely leading to happiness) than the others, then the will is naturally going to be inclined to choose that one.

Under this characterization, Buridan might seem to be squarely in the Aristotelian “intellectualist” tradition, as opposed to the Augustinian “voluntarist” tradition, despite his explicit claim that he was seeking a middle ground between these two camps concerning the issue of the determination of our voluntary actions (QNE, III, q. 4, fol. Liiii, ra). For, on the one hand, if the judgment of the intellect about the relative values of possible alternative courses of action fully determines the choice of the will, then, apparently, the will is not free, but its act of choice is determined by the intellect; whereas on the other hand, if the will chooses against the judgment of the intellect, then its choice is irrational, which goes against the very idea that intellect and will are our specifically rational powers (the intellect being our specific cognitive, speculative power, and the will our active, practical power), distinguishing us *qua* humans from brute animals. However, on Buridan’s solution of the dilemma, we do not have to opt for either of these bad theoretical alternatives. For although the will’s choice may be determined by the intellect with regard to its *content*, namely, insofar as the will is rationally inclined to choose the (ostensibly) better alternative, nevertheless, the will’s choice may not be determined by the intellect with regard to its *execution*, for the will always has the power of withholding its choice, especially when the relative values of the alternatives are not quite well-defined by the intellect, and may send the issue back to the intellect for further deliberation.

So, on this conception, the freedom of the will consists not so much in “spontaneously” (and hence, perhaps, irrationally) choosing *this* rather than *that* alternative, but rather in choosing or not choosing anything at all. To be sure, one may still say that since the will can rationally defer its choice only when there are reasonable doubts about the intellect’s actual evaluation of possible alternatives (if for no other reason than because of the lack of relevant information), and doubting is an act of the intellect, and so Buridan’s solution is still on the “intellectualist” side. However, his refined analysis still leaves more latitude for the will to act on its own than a simple intellectualist solution, as in practical matters it is almost always reasonable to doubt our evaluation of the situation (after all, we know that we are not omniscient), and so prudence (an intellectual virtue) would in most cases allow the will to defer its choice, unless the urgency of the situation does not allow any further hesitation.

In any case, for Buridan, it is certainly not the intellect's presentation of different alternatives alone that determines the will's choice. For although the will would rationally choose what is presented by the intellect as the best choice (unless the will freely defers its choice), nevertheless, its choice may also be influenced by its acquired habits, namely, its virtues and vices. But this influence is never full determination: the will is always free to choose otherwise (influenced by the judgment of the intellect) or not to choose at all. So, virtues and vices give only a certain tendency to our choices, manifesting our character.

See also: ► Commentaries on Aristotle's *De Anima* ► Durand of Saint Pourçain ► Impetus ► John Duns Scotus ► John of Mirecourt ► John Olivi ► John Philoponus ► Logic ► Mental Language ► Modal Theories and Modal Logic ► Nicholas of Autrecourt ► Thomas Aquinas ► Universals ► Voluntarism and Intellectualism ► William of Ockham

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