Graduate Theological Union
Systematic and Philosophical Theology
Special Comprehensive Examination Proposal

Mariusz Tabaczek, O.P.

PROPOSED COMMITTEE

Dr. Michael J. Dodds, O.P., Dominican School of Philosophy & Theology, Graduate Theological Union, Coordinator.

Dr. Robert J. Russell, Graduate Theological Union, The Center for Theology and the Natural Sciences, Second Reader.

Dr. Terrence Deacon, Professor of Biological Anthropology and Linguistics, University of California Berkeley, Outside Reader.

Dr. Anselm Ramelow, O.P., Dominican School of Philosophy & Theology, Graduate Theological Union, Fourth Reader.

Introduction

The question of understanding and explaining divine action in the context of contemporary science has been one of the major issues in the religion and science debate since the beginning of this interdisciplinary endeavor. Different ways and models of relating discoveries of natural science and the theology of divine action were proposed. The most prominent among them are: 1) the theory of emergence as a model of top-down causal influence of God on the natural world as a whole; 2) chaos theory and the idea of God interacting with the world through the input of active information into its open physical process; 3) God’s action through the indeterminism of nature on the quantum level; 4) theology of divine limitation; and 5) the concept of intelligent design.¹

In my future doctoral dissertation I would like to address some of the major theological implications based on the theory of emergence (EM) in reference to some recent studies of its character and meaning in the philosophy of science and of complex and higher-level biological structures and processes.

Philosophical reflection on the theory of EM emphasizes the fact that it is inextricably related to the idea of downward causation (DC), especially when we limit our

¹ The main thinkers representative for each one of these models are respectively: 1) Philip Clayton, Niels Henrik Gregersen, Arthur Peacocke; 2) John Polkinghorne; 3) Ian Barbour, Philip Clayton, Nancey Murphy, Robert John Russell; 4) Nancey Murphy, Arthur Peacocke, John Polkinghorne, Thomas Tracy; 5) Michael J. Behe, William Dembski.
discussion to the "strong", or "ontological" version of EM. DC is described as a new and special type of causation having a top-down direction (as opposed to a bottom-up character of the classic notion of causation in reductionistic science). As a condition *sine qua non* of the EM theory, it ensures its anti-reductionist character, which makes the whole concept of EM very attractive in the science/theology circles, especially in the debate on the nature of the divine action. However, a recent analysis of some metaphysical aspects of DC raises some crucial doubts and questions which need to be answered. What is the nature of DC? What is causal in DC, and what is being caused? Is there a possibility of presenting one, unified position among all those who, trying to explain EM and DC, define causal factors and things caused using different terminologies? Moreover, the whole project of emergent properties and the DC they exercise on lower levels of organization of matter seems to collapse into either reductive physicalism (if emergent properties are merely ways of summarizing complex micro-patterns, they are reducible to lower level properties after all, and do not have any special causal work to do), or dualism (if emergent properties have truly distinctive character, their physicalism is threatened).²

All these metaphysical difficulties concerning DC have led several authors to realize that the main problem of the whole theory consists in its attempt to explain DC in terms of efficient causality. They argue that, when understood in terms of efficient causation, the theory of DC leads to a logical error of circular explanation in which emergent properties have causative influence on lower lever entities or processes that in turn instantiate them. As a solution, they propose analyzing DC in terms of formal causality. What is more, Claus Emmeche, Simo Køppe, and Frederic Stjernfeld (2000); A. Moreno and J. Umerez (2000); Michael Silberstein (2006); Alwyn Scott (2007); and Philip Clayton (2006) all suggest, more or less implicitly, that with the concepts of EM and DC we have reopened the way not only to the formal cause, but to the whole plural account of causality (the material, formal, efficient, and final causes as found in Aristotle), which was lost in modernity, with the advent of the new science.³

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However, this approach has been challenged by some philosophers studying emergent phenomena who are skeptical about the Aristotelian metaphysics and claim that we should break with the Western ‘substance addiction’ in favor of a new ontology which is based on the primacy of process and event. They claim that it is indispensable in order to explain and save the concept of EM. Surprisingly, they do not side with the tradition of the process metaphysics of Whitehead. At the same time they do not offer any thorough metaphysical framework for the world of entities which they understand as ‘organizations of underlying far-from-equilibrium processes’ or ‘persistences of instances of organizations of underlying quantum process’. This may be due to the fact that they seem to be more interested in a scientific than a metaphysical notion of process.

A possible response to this challenge may be found in the study of complex and higher-level biological structures and processes. Particularly noteworthy here is the work of Terrence Deacon who, placing himself in opposition to the substance metaphysics which supports mereological analysis, introduces, in a series of articles and his significant study, *Incomplete Nature: How Mind Emerged from Matter*, a new explanation of EM based on the idea of causality dependent on ‘specifically absent features’ and ‘unrealized potentials’. He claims that this new approach brings about a paradigm shift in EM studies.

When we consider how EM has been applied theologically, we notice that the main line of inquiry built on the concept of emergent properties has embraced the position of “temporal theism”, which requires developing a theory of divine interaction with a changing world that entails a passive responsiveness on the side of God. That is why major proponents of the theology based on the theory of EM tend to be related to recent versions of panentheism, including process theology. They also situate themselves in opposition to the so-called “classical theism”, which they regard as “atemporal” and

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However, I believe that the above mentioned analysis of the most recent studies of emergent properties in philosophy of science and complex systems biology opens a new way for the theology of divine action based on the theory of EM.

The return to the idea of formal causality and the retrieval of the whole fourfold notion of causality in EM studies within the philosophy of science may be of crucial significance for theology, especially in the Roman Catholic tradition, which has always had a strong philosophical foundation. One of the most prominent theologians within this tradition is St. Thomas Aquinas, whose theological system is deeply rooted in Aristotelian and Platonic thought. What is of special importance for us is that Aquinas’ theology of divine action involves reference to all four types of causality depicted by Aristotle. God is described in it as the final cause of creation as a whole and of each creature in particular, the exemplar of all forms (forma formarum), the source of all efficient agency in nature, and the Creator of all matter ex nihilo (including primary matter).

But we can go further in our research. The new approach to the problem of causality within the philosophy of science finds an intriguing and challenging response and continuation within the philosophical reflection on the biology of complex and higher-level systems presented by Terrence Deacon. In his work Deacon is supportive of the idea of a retrieval of a plural notion of causality in nature. However, although he refers to Aristotle’s categories of efficient, formal, and final cause, he redefines each one of them, according to a dynamic and process understanding of nature and its components. A question arises of whether it may be possible to develop a new approach in the theology of divine action in reference to the theory of EM which, while rooted in the classical Aristotelian plural notion of causality, will be able to embrace the dynamic explanation of reality presented in contemporary science.

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8 Thomas Aquinas, Summa Theologiae, I, 44, 4; I, 103, 2, co.; I, 105, 2, ad 2.

9 ST, I, 44, 3, co.; Thomas Aquinas, Summa Contra Gentiles, III, 19, no. 4; III, 22, no. 7.

10 ST, I, 2, 3; I, 19, 5, ad 2; I, 44, 1.

11 ST, I, 44, 2.
In all three parts of my special comprehensive exam, I will try to explicate some facets related to issues described above that I hope to develop further in my doctoral dissertation. I will describe each one of them in what follows.

Part 1 – History of Theology

The History of the Idea of Causation in Philosophy and Science, and its Major Theological Implications

(eight-hour open-book exam)

As Michael Dodds, O.P. points out in his Unlocking Divine Action, Contemporary Science and Thomas Aquinas, if “God is and God acts”, then “we need a language of causality”\(^\text{12}\). In the first exam I want to explore the notion of causality in the history of Western thought. This historical trajectory has its roots in ancient Greece in the natural philosophy developed by Ionian philosophers, continued by Plato and Aristotle, and transmitted to the philosophy of the Roman Empire. For centuries, the Aristotelian fourfold division of causes into material, formal, efficient, and final cause was regarded as a valid explanation. This philosophical classification of causes also exerted a significant influence on theology.

A radical change came with Galileo and Descartes, who founded the new science of modernity, which was gradually distinguished from philosophical and theological inquiry. The materialistic and mechanistic version of atomism describable in mathematical terms soon became a predominant approach in natural science which rejected ideas such as form and purpose. This turn had a decisive impact on the philosophical and theological theory of causation. Formal and final causes were rejected, while efficient causality was reduced to the agency of locomotion. Although still interrelated, scientific, philosophical, and theological notions of causation began to develop separately in the wake of modernity and each one of them followed a slightly different path.

In natural sciences, the rejection of causes that cannot be observed and quantified led to materialist reductionism and the radical rejection of metaphysics. However, some crucial discoveries of contemporary science seem to reverse many of these tendencies. The theory of EM, the puzzling science of quantum mechanics, recent cosmological hypotheses, and new insights in the theory of evolution, all bring back questions of formal and final cause, and concepts such as teleonomy and purpose.

Moreover, the hostility of natural science towards philosophy has changed into a fascinating and intriguing conversation pursued within a new discipline called “philosophy of science” which, in addition to a general inquiry, now includes branches referring to the various special sciences (philosophy of biology, chemistry, etc.).

In philosophy, the revolution started by Galileo and Descartes was continued in the thought of Hobbes and the rationalist system of Spinoza. These early modern developments show already some major problems that emerge when formal and final causes are rejected. In both of them we encounter the problem of determinism. Hobbes rejects not only the Aristotelian idea of four causes but also the Cartesian dualistic alternative, and presents a purely materialist, nominalist, and deterministic view of the world in which all causes are efficient causes. Spinoza argues for the real existence of only one substance, God, from whom all things follow causally and necessarily. Interestingly, in reaction to the reduction of metaphysical change to locomotion (Descartes, Hobbes, Spinoza), Leibniz defends the idea of final and formal cause. The internal forces of his monads can be identified with substantial form (according to the principle of the identity of indiscernibles). Moreover, when conceived as appetites, they have also a teleological character. However, although in his system efficient and final causality are complementary, Leibniz does not escape entirely the problem determinism, which in his philosophy takes the form of a pre-established harmony.

The father of classical mechanics, Isaac Newton, builds upon the idea of the laws of nature. However, devoid of the notion of intrinsic principles of things (formal cause), which explain their regular propensities (final cause), these laws turn out to be descriptive only, without explaining why they are operative.

The example of Hume shows the fuller implications of abandoning formal and final causation. He argues that, if one takes such a position one must eliminate the efficient cause as well. Hume claims that because things do not have propensities, there is no intelligible relation between cause and effect. Thus he concludes that what is left is regularity in nature, and that the idea of causation is just a product of human observation of this regularity (constant conjunction of events) and the feeling of their necessary connection in the mind.

As on many other points, Kant’s approach to the concept of causation brings an attempt to reconcile rationalism and empiricism. Responding to Hume, he suggests that

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one should not look for causality in nature, but in the constitutive operation of mind. For him causality must be incorporated under a synthetic a priori category of the understanding. There is causality and necessity in nature, but they come from the human mind. His position was criticized by Mill who defended a radical empiricism.

In contemporary philosophy we can list several favored approaches to explain causation: 1) Causes as necessary and sufficient conditions; 2) Causal relations defined in terms of counterfactual dependence; 3) Causes as means-to-ends (an instrumental approach); 4) Probabilistic explanation of causation; 5) Singularist approach; 6) Philosophical revival of teleology and final cause.

In theology, the modern notion of causality devoid of formal and final cause led to the idea of an omnipotent God controlling the mechanism of the world. Such was the origin of deism which limits God’s action to the moment of creation claiming that after it the fine-grained mechanism of the cosmos works with extreme precision and does not need the Creator’s intervention anymore. In contrast to deism, but still within the paradigm of causation reduced to efficient cause, the liberal theology of Schleiermacher and Bultmann brought back the idea of God’s continuous action, but only in the human experience of a world, which in turn obeys the unbroken laws of nature. Thus they denied the possibility of God’s miraculous action in the world. Process philosophy and theology proposed in turn an idea of God working constantly in nature and human history, denying at the same time the primordial act of creation ex nihilo, and reducing God’s omnipotence and omniscience.

In contemporary theology we can observe a major influence of new theories of science on explaining divine action (EM and the science of complex systems, chaos theory, quantum indeterminism). They provided a foundation to recent versions of panentheism, the theology of divine limitation, and theology as related to chaos theory, quantum indeterminism, the anthropic principle, and intelligent design. We can also observe a revival of the classical Aristotelian notion of causality and a theology of divine action based on it.

In the course of my preparation for this exam I would like to study each one of these paths of reflection on causality and divine action in more detail. I am aware of the vast scope of the material that I have chosen for this segment of my special comprehensive exam. However, as one can see from the introduction presented above, all

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14 The main thinkers representative for each one of these models are respectively: 1) Thomas Nagel, Charles Hartshorne, Carl G. Hempel, Karl Popper; 2) David Lewis; 3) Robin G. Collingwood; 4) Patrick Suppes; 5) Curt J. Ducasse; 6) See Meno Hulswit, From Cause to Causation, 47-74.

three trajectories are intrinsically related, and problems concerning divine action have to be analyzed along with the history of philosophical and scientific reflection on causality. In my study I will concentrate on major figures in the history of this interdisciplinary research topic. Hereunder I list some of the most prominent thinkers.

**Primary Sources**

**Ancient Greece and Rome**

- Cicero, Marcus Tullius. *De Fato*. Translated by H. Rackham. London: W. Heinemann, 1948,  
- Plato. *Timaeus*. Translated by Benjamin Jowett. London: Oxford University Press, 1931,  

**Middle Ages**


**Modernity**


**Contemporary Period**


**Secondary Sources**


**Part 2 – Major Figure**

**Thomas Aquinas on Divine Action**

(25-40 page research paper)

The second exam will concentrate on the philosophical theology of St. Thomas Aquinas. The goal of the paper will be to show Aquinas' theology of divine action. This will involve an account of how he incorporates all four of Aristotle's causes in his account of divine action as well as his account of related themes such as: divine transcendence and immanence, the relation between God and creatures, the analogical character of the language of divine action, four modes of divine action in reference to four types of causality in Aristotle, primary and secondary causation, principal and instrumental causation, divine action and the causality of creatures.
This research will involve an engagement with most of Aquinas' works as well as an overall knowledge of the methodology and the structure of his philosophical and theological thought. I will base my research on the sources listed below.

**Primary Sources**


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Part 3 – Contemporary Theological Problem

Contemporary Issues in Divine Action

(a course designed and co-taught with Professor Michael Dodds, O.P.)

Introduction

Does God act in the world? Does God change the course of events? Is there a causal joint between nature and God’s action in the world? How can we explain divine action and human free will? Does one’s prayer influence God and God’s divine action? Do miracles occur and what is the nature of such events?

As shown in the first segment of my special comprehensive exam, the question of divine action has provoked much discussion since modernity. In the third part of my exam I would like to address the question of divine action in reference to the latest developments in the natural sciences. The exam will take the form of a course developed in accord with the norms of the Newhall Award that will be co-taught with Professor Michael Dodds, O.P. in the Fall semester of 2013.

Full details regarding the course are provided in the syllabus. The course is going to be offered as a systematic and philosophical theology (STPH) seminar course, and meet...
once a week for three hours. Each class will begin with an hour presentation prepared by one of the teachers. In preparation for each class every student will keep a brief “log” of her/his thoughts and questions on the readings. These questions will be solicited and listed after the initial presentation and form the basis for the seminar discussion. The course will also require that each student either give an in-class presentation of her/his semester research work and lead a discussion on it, or write a research paper on a chosen topic.

Degree of My Contribution to the Project

My idea to co-teach a class on contemporary issues in the theology of divine action was preceded by a long conversation with Professor Dodds based on his new book *Unlocking Divine Action: Contemporary Science and Thomas Aquinas*. The course was developed collaboratively regarding its content, structure, and assessment criteria.

I will prepare and teach most of the introductory presentations opening each section in consultation with Professor Dodds. Presentations for some of the sections concerning philosophy and theology of Aristotle and Aquinas will be prepared in cooperation and co-taught by both of us. Each presentation will not only introduce students to the topic of the class but will also provide them with some information that goes beyond the scope of assigned readings. The in-class discussions on assigned readings will be moderated by myself. Students will be graded by both teachers.

Syllabus

**Issues in Divine Action**

STPH 4885  
Fall, 2013  
Mon 2:10 PM - 5:00 PM, DSPT # 2 (tentative)

**Michael Dodds, O.P.**  
DSPT  
Off: (510) 652-2080  
Res.: (510) 652-3008  
email: mdodds@dspt.edu  
Office: DSPT Faculty Bldg, Nr. 201  
Office hours: TBA, and by appointment

**Mariusz Tabaczek, O.P.**  
GTU doctoral student  
Mob.: (330)-951-3387  
email: mtabaczek@gmail.com  
Office hours: TBA, and by appointment

**Course description:** A seminar course exploring how certain classical philosophical insights into the nature of causality (Aristotle and Aquinas) may be brought to bear on contemporary issues regarding divine action and empirical science. The course requires either an in-class presentation and written summary of one’s semester research or submitting a research paper.
Objectives: Students will be able to explain basic issues in the theology of divine action including how our understanding of causality has influenced the discussion of divine action, how empirical science affected our understanding of causality; how theories of contemporary science have been employed in the discussion of divine action and how they point to a broader understanding of causality that invites a retrieval of the notion of causality as found in the thought of Aristotle and Thomas Aquinas. The course will also introduce students to some important issues concerning methods of theology, philosophy, and science.

Class 1  Introduction

Class 2  Divine action as a problem
   M. Dodds, *Unlocking Divine Action*, chapters 1-3, 1-118
   L. Gilkey, “Cosmology, Ontology, and the Travail of Biblical Language”
   F. Dilley, “Does the 'God who Acts' Really Act?”

Class 3  Solutions: Deterministic world and divine action
   M. Wiles, “Religious Authority and Divine Action”
   D. Griffin, “Relativism, Divine Causation, and Biblical Theology”
   W. Alston, “Divine Action: Shadow or Substance”

Class 4  Solutions: Quantum indeterminacy
   M. Dodds, *Unlocking Divine Action*, chapter 3, 119-151
   N. Murphy, “Divine Action in the Natural Order: Buridan's Ass and Schrödinger's Cat”
   P. Hodgson, “God's Action in the World: the Relevance of Quantum Mechanics”

Class 5  Solutions: Chaos Theory
   J. Polkinghorne, *Theology in the Context of Science*, 96-122

Class 6  Solutions: Emergence
   P. Davies, “The Physics of Downward Causation”
   A. Peacocke, “God's Action in the Real World”
   A. Peacocke, “Emergence, Mind, and Divine Action: The Hierarchy of Sciences in Relation to the Human Mind-Brain-Body”
   N. H. Gregersen, “Emergence: What is at Stake for Religious Reflection”
   P. Clayton, “Toward a Constructive Christian Theology of Emergence”

Class 7  Reading Week
Class 8  **Broader perspectives: Methods of theology, philosophy and science**  
Thomas Aquinas, *Division and Method of the Sciences*, Q.5, aa. 1-4; Q.6, a.1.  
Thomas Aquinas, *Summa Theologica*, I, Q.1, a.a. 1-8; I, Q.13, a.5; I, Q. 32, a.1, ad 2.; I, Q.68, aa. 2-3  
W. Wallace, “St. Thomas Aquinas, Galileo, and Einstein”  

Class 9  **Retrieving causality**  
Aristotle, *Physics II*, c. 3.  
Aristotle, *Metaphysics* Book V, Chapter 2  
Thomas Aquinas, *Commentary on the Aristotle’s Physics* Bk. II, lect. 5-6, lect. 10, § 240  

Class 10  **Divine action in Aquinas**  
Thomas Aquinas, *Summa Theologica* I, Q. 14, a.8, 13; I, Q.19, a.4, 8-9; I, Q.105, aa. 2-5  
Thomas Aquinas, *De potentia* Q. 3, a. 7  
Thomas Aquinas, *Commentary on the Book of Causes*, Propositions 1, 20, 24  
M. Dodds, *Unlocking Divine Action*, chapter 6, 205-228.  
E. Gilson, “The Corporeal World and the Efficacy of Second Causes”  

Class 11  **Providence, Prayer and Miracles**  
ST I, Q. 22, a.a. 1-4; I, Q. 105, aa. 6-7.  
M. Dodds, *Unlocking Divine Action*, chapter 7, 229-264  
T. Nichols, “Miracles in Science and Theology”  
K. Ward, “Believing in Miracles”  

Class 12  Student presentations  

Class 13  Student presentations  

Class 14  Student presentations (if needed)  

The following books are required:  
Michael Dodds, *Unlocking Divine Action*, available through the DSPT (Amazon) website;  

Editions of Aquinas' *Summa Theologica* may be found in the GTU Library. It is also available online:  
[http://dhspriory.org/thomas/](http://dhspriory.org/thomas/) (includes many of Aquinas' other works also)  

The other readings are in Moodle.
In addition to participation in class discussions, the course will require a weekly "log" and a semester research project or a research paper.

In preparation for each class you should keep a brief "log" of your thoughts on the readings. This should include 2-4 key ideas in the readings, questions you may have about them, items that you think the class should discuss, notes on possibilities for your own future research, brief rebuttals, etc. Its purpose is not to summarize each reading (which you may want to do for your own purposes), but to engage the readings critically. To each idea or question you should add a short commentary explaining its context. But each "log" should be no longer than one or two pages. It should be typed and ready to hand in at the end of the class.

The course will also require that you give an in-class presentation of your semester research work and lead a discussion on it, or write a research paper on a chosen topic.

1) The presentation and discussion should last 40-45 minutes. Basically, you become the teacher. You can determine the structure of your presentation (how much time is given to presenting and how much to discussing; whether the discussion follows the presentation or whether the whole presentation is interactive, just so both elements are included). You should furnish the class with an abstract or outline of the presentation at the class meeting prior to the date that it is scheduled. You may also wish to furnish the class with a background article or website resource for your presentation. A final report on the research project will be due on December 17. It should contain a summary of all your readings, your conclusions, and reflections on the class discussion. It should be about 10 pages long.

2) A 15-20 page research paper on a topic chosen by you and approved by the teachers.

You should turn in a title and brief description of your presentation or your research paper topic (200-300 words) by class #9.

Grading will be based on the following criteria:

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<tr>
<th>Component</th>
<th>Weight</th>
<th>Description</th>
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<tr>
<td>Class participation and weekly logs</td>
<td>40%</td>
<td>Graded on existence (!) and evidence of thoughtful engagement with the texts and discussion in the class.</td>
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<td>Class presentation</td>
<td>60%</td>
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<tr>
<td>Content</td>
<td>30%</td>
<td>Includes knowledge of the topic; clarity and organization; usefulness of materials provided before the lecture (abstract/outline, optional background article/ website resource, etc.),</td>
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<tr>
<td>Style</td>
<td>10%</td>
<td>Includes audibility, engagement with the class, skill in answering questions, leading the discussion; effective use of visual aids (e.g., blackboard/, handouts, PowerPoint, etc.).</td>
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<tr>
<td>Final report</td>
<td>20%</td>
<td>Graded on organization, evidence of high level research, clarity of its conclusions, and good summary of your presentation and class discussion.</td>
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<tr>
<td>Research paper</td>
<td>60%</td>
<td>Graded on knowledge of the topic, creativity, organization, clarity, and evidence of graduate-level research (footnoted references to primary and secondary sources).</td>
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Selected bibliography for assigned readings


