The Faculties: The History of a Concept

Edited by Dominik Perler

Proposal for a volume in the series Oxford Philosophical Concepts (OPC)

Main Goal of Series

The main goal of OPC is to offer philosophically subtle and historically sound accounts of central concepts in the history of philosophy. Each volume will be a history of its concept in that it will offer a story about the most significant events in the life of the concept from its original inception through its transformations to its modern use. The point of this narrative is to deepen understanding of the concept and explore its role in the history of philosophy. Volumes will include the best international scholars, "extra-philosophical" material or Reflections, a lexicon mapping the relation between the concept and terms referring to it, and thorough indices.

1. Topic and scope of the volume

It seems quite natural to explain the activities of human beings and other animals by appealing to their specific faculties. Thus, we say that a dog can see and smell things in its environment because it has perceptual faculties. Likewise, we claim that a human being is able to grasp abstract thoughts because he or she has intellectual faculties. To put it in a nutshell: the use of faculties makes activities possible. Given this simple and seemingly plausible thesis, it is hardly surprising that a long philosophical tradition, starting with Aristotle, considered faculties to be of crucial importance. In fact, Aristotle argued that we cannot distinguish living from non-living beings unless we refer to the soul as the distinctive mark of living beings. This soul was considered to be a set of faculties that makes a wide range of activities possible – activities such diverse as breathing, nourishing, seeing, desiring and thinking. Ancient and medieval Aristotelians repeated this claim, thus making the concept of faculties a key concept in natural philosophy and philosophical psychology. Even early modern thinkers often referred to faculties, despite their harsh attacks on Aristotelianism. For instance, Descartes refused to speak about nutritive and sensory faculties, but he did not hesitate to call intellect and will the two faculties of the soul – faculties that enable us to grasp ideas and to make judgments.

The seemingly innocent reference to faculties gives rise to a number of questions. What are faculties supposed to be: dispositions, capacities, powers, inner mechanisms? How many are there in human beings or in other animals? In which ways are they interrelated? How can they be distinguished? And how exactly can they be activated in a given situation? Moreover, there is an even more fundamental problem.

Any appeal to faculties presupposes that it makes sense to explain a certain type of activity by referring to a given faculty. But do we really provide a substantial explanation when talking about a faculty? For instance, do we say anything illuminating when we affirm that human beings can think because they have intellectual faculties? This seems like saying that sleeping pills can put someone asleep because they have dormitive faculties (or dispositions, powers), as critics in the seventeenth century mockingly remarked. As long as we do not give a detailed account of their inner structure and their way of acting, we do not make any interesting claim when we talk about faculties. We simply use them as placeholders for something we are not yet able to explain.

Given this criticism, it is important not only to look at philosophical traditions that emphasize the indispensability of faculties, but also to examine opposing traditions that scorn them as obscure and explanatorily empty entities. Only a careful analysis of friends and foes will show to what extent the concept of faculties is indeed a crucial concept that cannot be dispensed with in an explanation of human as well as non-human activities, and to what extent it requires an elucidation by means of other concepts.

The book is intended to provide this kind of analysis by focusing on origin, development and use of the concept of faculties in various philosophical traditions. It goes without saying that it is impossible to reconstruct and discuss all traditions in a single book. Any volume that strives for completeness can provide nothing but a mere list or a dictionary of the various uses of the concept of faculties. Instead, the book aims at shedding light on a restricted number of texts and problems. It is therefore not *the* history, but *a* history of the concept of faculties. However, it is not restricted to a single historical period. It looks at four different periods in which faculties played a crucial role (ancient, medieval, early modern, Kant and idealism) and bridges the gap to contemporary debates that refer to faculties as “modules of the mind.” It is precisely the existence of such modules that explains the variety and special function of some mental activities, as Jerry Fodor famously claimed. Of course, Fodor and other contemporary philosophers do not simply repeat the old Aristotelian theory; they neither talk about nutritive and sensory faculties nor refer to hylomorphism as the metaphysical framework in which faculties are to be located. Nevertheless, they subscribe to the fundamental thesis that one cannot explain specific activities unless one appeals to a “functional architecture” that makes all these activities possible. And the building blocks for this architecture are the faculties that can be defined with respect to their causes and effects. It needs to be analyzed to what extent this modern approach to faculties continues older discussions and to what extent it introduces new aspects into the debate. That is why a careful analysis of older traditions, often neglected as a

mere “prehistory” of contemporary debates, and a comparison with current theories are required.

The book follows a historical order. It starts with an examination of Aristotle’s discussion of faculties in *De anima* and with ancient reactions to this first explicit faculty theory (chapter 1). Since Aristotle worked out his theory in a specific metaphysical context, it is of crucial importance to study some details of his hylomorphism and his account of faculties as “parts of the soul.” The book then pays close attention to late medieval debates that were shaped by Aristotle’s influential text, but also by the medical tradition that tried to localize some faculties in the body, and by Arabic authors who explained cognitive functions by referring to faculties (chapter 2). The analysis then turns to early modern authors who partly rejected the postulation of faculties, claiming that it was based upon false metaphysical assumptions, but partly also reintroduced faculties in a new metaphysical and epistemological context (chapter 3). Special attention will be paid to Spinoza, who tried to replace the assumption of faculties by attributing a striving for self-preservation (*conatus*) to particular things, and to Hume, who worked out a new associationist framework. In the next chapter, Kant and some German Idealists will be closely examined (chapter 4). Like Hume, they rejected the Aristotelian metaphysical framework, but they nevertheless considered faculties to be indispensable in a theory of knowledge, broadly conceived, and they even established a taxonomy of faculties in order to explain different types of knowledge. Finally, recent modularity debates will be considered (chapter 5). In particular, we will examine the functional definition and taxonomy of faculties, which plays a crucial role in these debates (5.1). In addition, we will also look at criticisms, based on research in neuroscience and psychology, that cast doubt on modularity hypotheses and on the idea of innate faculties (5.2). Since the entire book focuses on the history of the concept of faculties, this last chapter is not meant to be a contribution to systematic debates in philosophical psychology. It is rather intended to integrate these debates within a larger historical context by means of pointing out both similarities and dissimilarities with earlier traditions.

The five chapters described so far will be complemented by three “reflections” that highlight the attention paid to faculties in science and visual arts. The first will focus on early modern prints (mostly from the sixteenth century) that illustrated faculties by showing how and where they are located in the human body. These illustrations were a crucial ingredient of anatomical textbooks. The second reflection will deal with nineteenth-century attempts to assign different faculties to different parts of the brain. These attempts became known as “phrenologist theories” and had an impact not just on philosophical and medical debates, but also on scientific graphic literature. Finally, the third reflection will highlight the visualization of faculties in contemporary neurobiological experiments that make use of “brain imaging” techniques. The three reflec-

tions should contain samples of illustrations and will be prepared in cooperation with art historians and historians of science. (There is a Department of Art in Science at Humboldt University that has a very rich collection of pictures.)

All the five chapters and the reflections will be preceded by a detailed introduction that is supposed to explain not just the scope of the volume but also the problems that any theory of faculties has to face. The most crucial problems are:

- *The categorization problem:* What kind of entities are faculties? Can they be reduced to more fundamental ones, or are they irreducible? What kind of metaphysical framework is required for a satisfactory explanation? Do faculties become obsolete as soon as one gives up a certain framework, say an Aristotelian one?
- *The individuation problem:* Why can we talk about distinct faculties? Is there an individual bearer for each faculty? But how can there be many bearers inside one single living being? Or is it the causal role that accounts for the individuation of faculties, i.e. the fact that each faculty brings about a certain type of states or activities? How could this causal role be described?
- *The access problem:* What kind of cognitive access do we have to faculties if they are not directly perceptible? Can they be known via the perceptible activities to which they give rise? Or can they only be postulated as causes of these activities? But why then should they be postulated if they are nothing but “hidden entities”?
- *The localization problem:* Are faculties properties of bodies that can be assigned to parts of the bodies? And if so, can various faculties be localized in specific parts of the body? Or are faculties not to be understood as properties of bodies, but as properties of other entities, for instance of immaterial minds or souls? But how then can they be localized at all? And where exactly should they be localized?
- *The taxonomy problem:* Is it possible to establish a list of faculties? Is there a specific list for human beings, which differs from the lists for other animals? What items are on the list? And is there a specific order among these items, perhaps even a hierarchical one? What could be relevant criteria for establishing an order?
- *The cognition problem:* Do faculties play a special role in the explanation of cognitive activities? Is it even possible to give an account of different types of cognition (perceptual, linguistic, mathematical, etc.) by referring to corresponding faculties? And can these faculties be delimitated from those that have no cognitive role?

The introduction is intended to pave the way for a detailed discussion of these problems in the subsequent chapters. If all the five chapters focus on these problems,

there will be a systematic connection between them, despite the different historical contexts and authors that will be examined. It will also be possible to detect developments or ruptures in the history of the concept of faculties, for a development can always be observed when new solutions to given problems are presented or when new problems are identified. It is precisely an analysis of problems and problem solving strategies, not a mere historical overview, that should be the goal of all the chapters.

Since the texts to be examined stem from different philosophical traditions that have their own technical terms, it will be important to prepare a glossary of key terms, but also to explain them in each chapter and to make them accessible to modern readers. Even readers who are not familiar with, say, scholastic or Kantian debates should be able to understand the chapters dealing with late medieval or late eighteenth-century discussions. That is why clarity and jargon-free language are of crucial importance for the whole volume.

2. Abstract of the five chapters

Chapter 1

Klaus Corcilius: Ancient debates

Apart from scarce antecedents in the history of medical thought, the history of the concept “power / capacity / faculty” is right from its beginning interwoven with the philosophical concept of the soul. In his *Republic* Plato introduces the famous three parts of the soul by way of a general metaphysical analysis of faculties. Aristotle inherits this model from Plato. He systematizes it and applies it to his works on natural philosophy. His systematic version, the Aristotelian metaphysical analysis of faculties, was to become the prevailing model for many centuries to come. It also forms the metaphysical backbone of Aristotle’s scientific account of the soul and its “parts.”

Both, the Platonic beginnings and Aristotle’s more systematic version of it, will be discussed in this chapter. In both cases this will be achieved with a special focus on the methodological applications of the model in the field of philosophical psychology. Therefore, a comparison between the Aristotelian concept of “parts of the soul” and the modern modularity of the mind will be included.

Already in antiquity the Platonic/Aristotelian metaphysics of faculties encountered its critics. The second century doctor-philosopher Galen of Pergamum, for instance, offered a thorough critique along a skeptical interpretation of the categorization and the individuation problem. He argued that faculties are individuated by way of their effects such as they present themselves to us, and that this shows that they fall under

the category of relatives. He concluded that the description of the soul's faculties cannot provide genuine knowledge of the substance of the soul. Consequently, Galen remained agnostic about the true substance of the soul, thereby anticipating a great deal of the early modern critique of "faculty psychology."

This chapter describes Galen's critique and presents an outlook on a possible defence of the Aristotelian metaphysical analysis of faculties: Within the framework of substance-sortal ontology an Aristotelian metaphysics of faculties seems not only unavoidable, but also perfectly reasonable.

Chapter 2

Dominik Perler: Medieval debates

Aristotle's *De anima*, which became part of the curriculum in medieval universities around 1260, sparked a long and heated controversy over the metaphysical status of faculties. Many late medieval authors (among them Thomas Aquinas, John Duns Scotus, William Ockham, John Buridan, Jacob Zabarella, Francisco Suárez) participated in this controversy. They were mostly interested in the categorization problem, because all of them would ask if faculties can be reduced to the substance of the soul or if they are special entities added to this substance. In addition, they asked if it makes sense to speak about a single soul that exhibits many faculties or if one needs to posit a plurality of souls. The so-called "unitarists" chose the first option, while the "pluralists" preferred the second. The chapter will closely examine the debate between these two groups and analyze the metaphysical framework in which they argued for their position. Special attention will be paid to late sixteenth-century authors (Zabarella and Suárez) because they gave the most detailed account of both positions and spelled out the metaphysical consequences.

Moreover, late medieval authors were also strongly interested in the taxonomy problem. Inspired by Avicenna, they tried to distinguish a number of external and internal senses by referring to various faculties, and they assigned a special function to each one of them. The chapter will focus on Aquinas' and Ockham's taxonomy as case studies and analyze not only the taxonomic schemes but also the criteria that were used in order to establish these schemes. Discussions about various schemes were closely linked to, or sometimes even motivated by, an analysis of the localization problem, because medieval authors tried to assign specific faculties to specific parts of the body, thus establishing a taxonomy that was based on a physiological or anatomical analysis. However, all authors agreed that intellectual faculties are to be understood as immaterial faculties. How then can they be localized in the material

body? The chapter will consider various attempts of solving this problem that gave rise to various forms of dualism.

Finally, the chapter will discuss the cognition problem that was at the core of many late medieval debates. Scholastic authors tried to demarcate cognitive from non-cognitive beings by appealing to special cognitive faculties, and they even attempted to establish a hierarchy of these faculties. A brief analysis of these attempts sheds light on their understanding of cognition in general as well as on their classification of different types of cognition. Here, again, Aquinas' and Ockham's accounts will serve as case studies, because they offered two very different classifications of cognitive faculties and of the states to which these faculties give rise.

Chapter 3

Stephan Schmid: Early modern debates

Early modern philosophers rejected Aristotelian hylomorphism and tried to replace it by a worldview inspired by the mechanistic physics of their days. Yet, the opposition to Aristotelianism did not relieve them from the task of accounting for the phenomena scholastic authors were wont to explain by appealing to faculties. That is, early modern philosophers did not mean to deny the obvious fact that certain things tend to exhibit a specific behaviour under certain circumstances and thus possess specific dispositions or capacities which require an explanation.

In providing such an explanation they roughly pursued two strategies: According to a *dualist strategy* a range of early modern authors following Descartes drew a sharp line between physical and mental phenomena and explained these types of phenomena in different ways. Thus, physical capacities – such as the fire's disposition to set inflammable material on fire – are to be explained by describing the corpuscular microstructure of the bodies exhibiting these capacities and by appeal to the laws of nature. Mental capacities like our ability to understand and choose certain things, by contrast, are to be explained with regard to genuine faculties – namely our intellect and our will. These were taken to be mental instances responsible for the execution of our acts of understanding and willing. Other early modern authors endorsed a *monist strategy* claiming that mental capacities are in principle to be explained in the same way as physical capacities: As capacities of bodies are determined by their constitutive parts, our mental capacities likewise depend on the structure of our mind. What we are able to think of is simply determined by the beliefs we already have and the inputs we receive. The only difference between physical and mental capacities consists in the fact that the former are subject to laws of motion whereas the latter

succumb to psychological laws of association. This monist strategy was famously pursued in different ways by Spinoza and Hume.

The chapter will present these two different early modern strategies of explaining capacities using the examples of Descartes, Spinoza and Hume. It will therefore reconstruct the reasons these authors provided for their respective views. The strategy they adopted in accounting for capacities determined their reactions to the above mentioned problems raised by a theory of faculties. Concerning the categorization problem, monists tended to reduce faculties to structural features of the things exhibiting certain capacities, while a dualist like Descartes would claim that the mind was endowed with basic passive and active faculties that cannot be reduced to more fundamental features. Similarly, their different overall strategies shaped the way they dealt with the individuation problem and the localization problem.

Although early modern philosophers criticized their scholastic predecessors for prematurely postulating dubious entities like faculties in order to explain capacities, authors following Descartes tended to agree with the scholastics that our talk about capacities and dispositions must be substantiated by a metaphysical theory. It was only Kant who refused to understand faculties by means of a metaphysical notion.

Chapter 4

Johannes Haag: Kantian and Idealist debates

Although at first glance it might seem as if Kant and his successors chose an extreme form of dualist approach to the concept of faculty and thereby engaged in the metaphysical project of their predecessors, nothing could be more mistaken. As a consequence of the methodological turn in the wake of the newly discovered transcendental-philosophical approach to important philosophical questions, the whole set of problems connected to metaphysical categorization in general and to the metaphysical status of faculties in particular lost its predominance. It is this very development that will be the focus of this chapter.

In a first part, an examination of Kant's critical work will show that the concept of faculty itself now served a two-fold methodological purpose: On the one hand, it was frequently used to delineate our own epistemic capacities *from within* those borders by postulating faculties as conditions of the possibility of these very capacities; on the other hand, the concept of faculty proved to be useful in delineating the epistemic capacities *from outside*, as it were, by means of outlining the conceptual possibility of capacities we – as human beings or, broadening the scope of the investigation, as finite rational beings – do not and cannot have for principled reasons.

A case in point for the first methodological strategy is, of course, the passive or receptive capacity to receive sensory impressions – a receptivity that is ascribed to the faculty of sensibility – and the active or spontaneous capacity of synthesizing those impressions into conceptually structured representations – a spontaneity that is in turn ascribed to the discursive intellectual faculty or understanding. Since none of the two faculties alone can provide us with knowledge, as Kant famously argued, it is only in their interplay that those faculties become genuinely *epistemic* faculties – an interplay we consequently have to accept as delineating the epistemic scope of each of them from within.

As for the second methodological strategy, it is employed for instance in Kant's conception of an intellectual intuition, used to contrast with our own non-productive epistemic faculties. This faculty that already figures in the first *Critique*, is complemented in the third *Critique* by the faculty of an intuitive understanding, i.e. a non-discursively operating faculty of understanding (as opposed to our discursive intellect).

The latter, contrasting approach to faculties was of the utmost importance for the development of post-Kantian, idealist philosophical systems. For in one or another form, all of the German Idealists took up one of those capacities and put it to a quite different use in claiming that we as finite beings do in fact have the faculty in question, albeit in a carefully modified sense. In this way they transcended the Kantian framework in different, but each time radical ways: The faculty of intellectual intuition was taken up by Fichte and Schelling, whereas the utilization of the concept of an intuitive understanding paved the way for the development that led – via Goethe's mediation – to the system presented by Hegel in his *Phenomenology of Spirit*. Focusing on Fichte and Hegel, this development will be sketched in the second part of the chapter.

Chapter 5

5.1. Rebekka Hufendiek and Markus Wild: Contemporary debates – modularity, the very idea

The modularity debates continue early modern debates over innateness and over empiricism. They are, however, strictly informed by natural science in a way no philosophical account of the human mind has ever been before. The chapter will pay attention to this close connection between philosophical and scientific theories.

In his highly influential *The Modularity of Mind* (1983) J. Fodor argued for a particular version of the old claim that fundamentally different kinds of psychological faculties must be postulated in order to explain the facts of mental life. According to his "modularity thesis" some psychological faculties are modular, which means that their

processes are self-contained. The targets of cognitive modular processes are the lower perceptual processes (e.g. object perception). The higher level processes (e.g. analogous reasoning) work with modular inputs stemming from lower processes, but they are not themselves modular. Unfortunately, Fodor gave no definition of the central concept of "modularity" and suggested a series of loosely connected characteristics (such as fast processing, being domain specific, innately specified, hardwired, autonomous, producing shallow outputs, exhibiting specific breakdown patterns etc.). Consequently, the distinction between modular lower faculties and non-modular higher faculties was not accepted by many researchers. Given these shortcomings, many philosophers and psychologists reassessed the concept of modularity, arguing for a massively modular conception of the human mind.

The main *internal* challenge for massively modular theories consists in explaining creative, flexible, or scientific thinking, and in explaining what or who is the subject of thinking. The main *external* challenge targets the very idea of autonomous faculties (parts of the brain) doing things we normally ascribe to living beings, not to parts of living beings (homunculus fallacy; mereological fallacy). The cognition problem is especially pressing for the modularity debates. According to weak modularity perception is modular, while cognition is not. According to massive modularity cognition is largely or completely modular. For the external critics of modularity the individuation problem is pertinent: A module or subsystem has to be individuated by pointing to a domain of performance; the performance, however, is done by the overall system; in order to explain the performance other subsystems have to be taken into account; therefore, an integrated system is responsible for a performance, not an isolated module.

5.2. Jesse Prinz: Contemporary debates: faculties without modularity

Modularity is a central tenet of mainstream cognitive science, and it has gained ground with recent work in evolutionary psychology. Modularity hypotheses have taken a number of different forms, including the postulation of domain-specific rules (Chomsky), informationally encapsulated input systems (Fodor), and a parcelling of central systems into highly specialized innate capacities (Cosmides and Tooby). However, the case for all the leading forms of modularity has been unpersuasive, and there is considerable evidence against the view that the mind is modular. Against the postulation of domain-specific rules, there is considerable evidence that the default strategy of the mammalian brain is to re-use the same rules for multiple purposes. Here work from neuroscience and psychology on how the brain uses the same areas for different function is reviewed (e.g., Anderson, Barsalou, Bates, and others). With respect to informational encapsulation, there is considerable evidence

that sensory systems influence each other in content-specific ways and that they can be influenced by information in central systems. Work on intersensory integration, emotional influences on perception, and top-down effects, including those mediated by language, imagery, and attention is important here. In response to the evolutionist's massive modularity hypothesis, one can take issue with a priori arguments for hyper-specialization, and present a dilemma according to which the proposal is either trivial or false. It will also be suggested that the case for innateness has been overstated. On the positive side, a view of how the mind might work if not modular is sketched. We need not give up on faculties if we give up on domain specificity and encapsulation. This sketch of a positive view draws on ideas from classical empiricism, but also niche construction and other phenomena in which we exploit the external environment to facilitate specialized forms of information processing.

3. Length and structure of the volume

Introduction:		30 pages
Chapter 1:	Ancient debates	40 pages
Chapter 2:	Medieval debates	40 pages
Reflection:	Sixteenth-century illustrations	10 pages
Chapter 3:	Early modern debates	40 pages
Chapter 4:	Kantian and Idealist debates	40 pages
Reflection:	Phrenologist illustrations	10 pages
Chapter 5:	Contemporary debates	40-60 pages
Reflection:	Neurobiological illustrations	10 pages
Glossary		10 pages
Bibliography and indices		20 pages
Total		**290-310 pages**

4. The contributors

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Johannes Haag is Professor for Theoretical Philosophy at the University Potsdam. He previously taught at Ludwig-Maximilians-University, Munich, and at Humboldt-University, Berlin. He was academic coordinator of the Leibniz Award Research Group "Transformations of the Mind – Philosophical Psychology between 1500 and 1750". His work ranges from topics in early modern philosophy over Kant and German Idealism to contemporary philosophy of mind and philosophy of language. He is the author of *Der Blick nach innen – Wahrnehmung und Introspektion* (Paderborn, 2001) and *Erfahrung und Gegenstand. Das Verhältnis von Sinnlichkeit und Verstand* (Frankfurt a.M., 2007) and co-editor of *Ideen. Repräsentationalismus in der Frühen Neuzeit* (Berlin & New York, 2010).

Rebekka Hufendiek is a Research Assistant at Humboldt University, Berlin and a member of the Collegium for Advanced Studies of Picture Act and Embodiment. She is currently working on her Dissertation on Embodied and Situated Emotions. Her interests lie in philosophy of mind, especially naturalistic theories of the mind, embodied and situated cognition, teleosemantics and current theories of emotions and perception.

Dominik Perler is Professor of Philosophy at Humboldt University, Berlin. He previously taught at the Universities of Oxford and Basel. He is a member of the Berlin-Brandenburg Academy of Arts and Science, was a Fellow at the Wissenschaftskolleg zu Berlin and the Istituto Svizzero di Roma, and had visiting positions at UCLA, St. Louis University, Tel Aviv University and the University of Wisconsin in Madison. In 2006 he was awarded the Gottfried-Wilhelm-Leibniz-Preis. His research focuses on late medieval and early modern philosophy, mostly in the areas of metaphysics, philosophy of mind and epistemology. He is the author of *Repräsentation bei Descartes* (Frankfurt a.M.,1996), *Theorien der Intentionalität im Mittelalter* (Frankfurt a.M., 2002), *Zweifel und Gewissheit. Skeptische Debatten im Mittelalter* (Frankfurt a.M., 2006), and the editor of *Theories of Intentionality in Ancient and Medieval Philosophy* (Leiden, 2001) and *Transformations of the Soul. Aristotelian Psychology 1250-1650* (Leiden, 2008). He is on the editorial board of a number of journals, among them *Journal of the History of Philosophy*, *Archiv für Geschichte der Philosophie*, *Zeitschrift für philosophische Forschung*, *Vivarium*, *Recherches de théologie et philosophie médiévales*, and co-editor of the book series *Quellen und Studien zur Philosophie*.

Jesse Prinz is a Distinguished Professor at the City University of New York, Graduate Center. Previous posts include the University of North Carolina at Chapel Hill, the Philosophy-Neuroscience-Psychology program at Washington University, the CABS center at Stanford, the University of London, and California Institute of Technology. In 2003 he was awarded the Stainton Prize for Notable Achievement in Cognitive Science, and in 2007 with the Tanner Award for Excellence in Undergraduate Teacher. His research primarily focuses on the philosophy of psychology, and aims at resuscitating core claims of British Empiricism against the backdrop of contemporary philosophy of mind and cognitive science. He is the author of *Furnishing the Mind: Concepts and Their Perceptual Basis* (MIT, 2002), *Gut Reactions: A Perceptual Theory of Emotion* (OUP, 2004) and *The Emotional Construction of Morals* (OUP, 2007), editor of the *Handbook of the Philosophy of Psychology*, (OUP, forthcoming) and co-editor of *Mind and Cognition* (Blackwell, 2008). Among his numerous articles the following is especially relevant: "Is the Mind Really Modular?" in R. Stainton (Ed.), Contemporary Debates in Cognitive Science (OUP, 2006).

Stephan Schmid is Research Assistant in Theoretical Philosophy at Humboldt University, Berlin. He has been a member of the Swiss Study Foundation and a member of Dominik Perler's Leibniz Award Research Group "Transformations of the Mind – Philosophical Psychology between 1500 and 1750." He has worked on causality and intentionality in Spinoza and Arnauld, and on the history of final causes and teleological explanations in the late medieval and early modern period (particularly in Aquinas, Suárez, Descartes, Spinoza and Leibniz). His research focuses on theories of causality and modality and philosophy of mind both in contemporary debates and in the medieval and early modern period. He is currently working on the conceptions of powers and potentialities in medieval and early modern debates. He is the author of *Finalursachen in der frühen Neuzeit* (Berlin & New York, 2010) and co-editor of the special volume "Final Causes and Teleological Explanations" of the journal *Logical Analysis and the History of Philosophy* (2011).

Markus Wild is Research Assistant at Humboldt University, Berlin. He previously taught at the University of Basel. His research focuses on early modern philosophy and contemporary philosophy of mind and biology, with a spotlight on animal minds. He is a member of the interdisciplinary Ernst-Strüngmann-Forum "Animal Thinking", author of *Die anthropologische Differenz* (Berlin & New York, 2006), *Tierphilosophie* (Hamburg, 2008) and co-editor of *Unsicheres Wissen/Uncertain Knowledge* (Berlin/New York, 2009) and *Animal Minds and Animal Morals* (forthcoming). He is currently working on a study on *Biosemantics and Intentionality*. Since 2008, he has

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