2 Baumgarten on the Nature and Role of Metaphysics

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2.1 Introduction

The aim of this chapter is to reach a deeper understanding of Alexander Gottlieb Baumgarten's views on the nature and role of metaphysics. By the "nature" of metaphysics, I mean just what it is – its definition – and whatever might be the foundation of this definition, whereas by its "role" I mean both the general function that metaphysics is supposed to have with respect to other sciences and the role it is supposed to have in our lives more generally. Neither topic has received much attention in the literature, although they are clearly central to understanding the reception of his philosophy among Kant and his contemporaries. Indeed, with only one exception, most commentators seem to assume that in respect to these key issues, Baumgarten is not notably different from his famous predecessor, Christian Wolff.[1]

In this chapter, I will demonstrate that there are several fundamental and original aspects to Baumgarten's conception of metaphysics that have been overlooked or at least insufficiently investigated. If I am correct, then Baumgarten departs from his predecessors, and from many of his contemporaries, by regarding metaphysics as a uniquely human science whose essential purpose is to provide the best instruments for knowing and realising perfection in human life, given that we are subject to essential limitations. I will argue further that this instrumental view of metaphysics leads him to develop several Leibnizian ideas regarding perfection and the best possible world into highly articulated metaphysical doctrines that are able to serve as universal guiding principles for all other sciences. In the final part of this chapter, I will illustrate three ways in which metaphysics plays this role through an examination of the foundations of Baumgarten's own practical philosophy.

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2.2 The Nature of Metaphysics

2.2.1 *Baumgarten's Definition of Metaphysics*

To understand the nature of metaphysics as Baumgarten saw it, we must begin by considering what he says about philosophy, since metaphysics would seem to be one, if not the main part of that discipline. His statements on this topic are found distributed in three separate works, namely his *Acroasis logica* (hereafter simply *Logic*) published in 1761 and reissued posthumously in a revised and arguably less authoritative form in 1765 (and 1773),[2] his *Philosophia generalis*, posthumously published in 1770, and his *Metaphysica* (hereafter *Metaphysics*), the first edition of which appeared in 1739.

It is in the *Logic* that we discover Baumgarten's initial definition of philosophy:

> PHILOSOPHY is the science of the qualities in things that are to be known without faith. (*PHILOSOPHIA est scientia qualitatum in rebus sine fide cognoscendarum.*)
>
> (Baumgarten 1761: §1)

This definition has three main parts. Firstly, philosophy is 'science', meaning it is 'certain knowledge based on what is certain' (Baumgarten 1761: §2). Hence, the first grounds of philosophy, also called its 'principles', must be certain and all further philosophical propositions must be demonstrated based upon them. Now, since demonstration is a process realised by the intellect and, in particular, by reason, and is one through which concepts are rendered distinct, philosophy is also a product of reason and itself consists of distinct knowledge. Secondly, philosophy is the science 'of the qualities in things'. In the *Metaphysics*, Baumgarten defines qualities to be internal distinguishing marks of a thing that can be known distinctly 'without assuming or relating them to anything else (without the presence of anything else)' (Baumgarten 2014: §69). Hence, although both philosophy and mathematics are scientific in the formal sense just stated, the two disciplines differ with respect to their objects or materially; the former studies the qualities or non-relational realities in things, while the latter studies quantities, which cannot be understood unless a thing is related to something else, which is taken as its measure. Thirdly and finally, the definition tells us that this science of qualities must be known '*sine fide*'. Translating this as 'without faith' is correct but also apt to mislead, since by '*fides*' Baumgarten does not exclusively, nor indeed primarily, intend us to think of religious faith. Rather, the *Logic* informs us that 'faith' is one of three principal sources of knowledge, the

others two being sensation or experience and reason. Faith is assent based upon testimony (Baumgarten 1761: §357). Knowledge based on 'faith' thus broadly encompasses anything that requires the reliance on the assertions of others and so includes history proper, but also jurisprudence insofar as the latter relies on witnesses or historical records, and finally also revealed religious doctrines.

For this reason, a more transparent but also looser rendering might be that philosophy is the science of qualities that does not require belief in anything told to us by someone else.[3] This qualification would already be implied by the definition of science as 'certain knowledge based on what is certain', if not for the fact that Baumgarten admits not only rational certainties, but also sense-based and historical ones, which are clear but not yet distinct. Thus, philosophy excludes from its first principles only historical certainties. And yet while Baumgarten does admit that there exist certainties of sense, he also argues that we must always strive to reduce these to certainties of reason, that is, to axioms or postulates that are not only certain and clear, but also certain and clear in a distinct or demonstrated manner.

In sum, then, philosophy is formally considered as a science that excludes the evidence of non-first-person testimony; materially considered, it concerns the qualities, or non-relative internal realities in things. In his *Logic*, which is mainly just a commentary on Wolff's German textbook, this definition is presented without much discussion or context. But in *Philosophia generalis*, which is the 'science of the many general predicates of philosophy that are common to its parts' (Baumgarten 1770: §1), Baumgarten provides a fuller theory of this definition's origins and consequences. As he now explains, to understand the above definition and its correctness, we must carefully attend to the logical canons for the formation of definitions, which are covered in the *Logic* (§§64–95). Among other things, these canons instruct us to begin by establishing a nominal definition, that is to say, a clear statement of the attributes of a thing signified by a word when the latter is understood properly in accordance with conventional usage. Establishing a nominal definition, on this account, requires primarily a historical investigation into the etymology and public use of a word, combined with skilled judgement in determining its specific predicates. Only once the signification of term is precisely fixed, is it then possible to begin developing the real definition of what it signifies.

With this in mind, it is clear that the definition of philosophy offered in the *Logic* is purely nominal (Baumgarten 1770: §21) and as such allows us only to pick out and name something indeed referred to by common usage, but whose reality has yet to be established and whose genuine essence, if it has one, has yet to be fully determined. Now, how is a philosopher to go about establishing and determining the real definition of philosophy? As a species of science, which involves representing the rational connections between things, it is something that can be realised only by an intellect and exists only insofar as it is found in one. So what philosophy really is, or, in other words, the real definition of philosophy, will express the essence of what the intellect able to realise philosophy would have in mind, and philosophy itself will be possible only if such an intellect is possible. This individual, or better, this individual's intellect, will then exhibit what philosophy, understood in terms of its essential realities, consists in, and will have deduced its real definition from its nominal definition through their very own activity (Baumgarten 1770: §29).

Having established this much, the next natural question Baumgarten addresses is what form this philosophy will in fact take. In pursuing an answer to this question in the *Philosophia generalis*, Baumgarten immediately brings to bear a set of principles which are distinctive to his thought, and which, I believe, are also key to understanding its reception and development in Kant, namely that portion of his ontology found under the heading 'The first principles of the mathematics of intensive quantities'. Due to the significance of these principles and the fact that little attention has been directed to them in the literature, I want to take a moment here to briefly describe them and then explain below how they are used by Baumgarten to reach a better understanding of what philosophy, according to its real definition, must be like.

As indicated in the preface to the second edition of his *Metaphysics*, Baumgarten believes that 'a new sphere of meditation, as it were, is often opened up' by a special discipline he has invented under the title of the 'mathematics of intensive quantities'. This new part of metaphysics, which is to be the foundation for a 'mathematics of non-extended things' (Baumgarten 2014: §249), 'will in the end grant you, a thinker, an indisputably singular joy alongside a million other amusements if you were to conceive of what is the greatest of that which is real and positive and thus discover God and the divine' (Baumgarten 2014: 90). At its core, the mathematics of intensive quantities is to be nothing less than a higher mathematics that formalises the ways in which the relative degrees of reality and perfection in anything are determined or measured, and how these are related to both the minimum and the maximum within their kinds, the maximum being the ultimate measure and model with respect to all lower degrees.[4] Kant would later reformulate and limit this mathematics to the single principle governing the reality in phenomena (the so-called Anticipations of Perception, A165–176/B207-218), but Baumgarten takes it to be the single, universal means for providing insight into the many degrees of realities or perfections in finite beings, the concept of the most perfect being, and the relation between the two. And since a precise knowledge of the relative perfection of a thing is also essential to judging

whether something is better or worse, more or less perfect, complete or incomplete, it is evident why the first principles of the mathematics of intensive quantities must play a fundamental guiding role in the construction of all sciences, especially in those that require wise judgement.

If one further examines this set of principles in detail, a few features stand out. The first group of the principles (§§165–79) runs serially through all the basic ontological concepts and subjects them to a common formula for defining the lowest degree of that concept, the manner in which it may be increased, and the maximal degree it can reach. The list of concepts covered includes, among others, possibility, ground, nexus, sufficient ground, essence, unity, identity, and defect. Here, notably, Baumgarten introduces the key perfections of grounds, namely their fecundity and weight (gravity or nobility), which are closely tied to their perfections as motives for willing. A second group then follows (§§180–9), which deals with rules of perfection, the various degrees of strength in a law, how to determine the strength of a law relative to another law, how to measure the conformity of things to rules and laws, the connection between the magnitude of order and its conformity to rules, and metaphysical perfection, or conformity of things to the first principles of human knowledge. Finally, the principles culminate in definitions of the evidently central concept of the most real being, which is the basis of the ontological proof, as well as the related concepts of the supreme good, the metaphysical best, and the contingent supreme good (§190).

Now, as I indicated above, Baumgarten draws on this set of principles to further determine the real definition of philosophy. He does this by first using the definition of philosophy as science to determine its various perfections, and then subjecting each of these latter to the appropriate formula from the mathematics of intensive quantities. Since science is a species of cognition, for example, 'that which is more, greater, truer, clearer, more certain, more ardent, arises from more and more certain things, is the greater science, until it is the very most, greatest, truest, clearest, most certain, most ardent, flowing from the most and most certain things' (Baumgarten 1770: §31). Over the next sixteen paragraphs (§§31–46), this strategy is employed to reach a definition of the highest forms of these perfections, which then are understood to be the determinations of philosophy, and so also of the philosopher, in their highest forms.[5]

This provides the ground for finally presenting the real definition of philosophy in the first two sections of a chapter entitled 'The Philosopher'. The two sections in question bear the headings, 'The Archetype' and 'The Ectype', the former referring to philosophy according to its real definition and the latter to philosophy as it is developed among finite beings and, in particular, among human beings. As we saw above, philosophy according to its real definition will be the actual body of knowledge known and

deduced by the philosopher based upon the nominal definition found in the *Logic*. Consequently,

> The philosopher is the one in whom philosophy exits. Hence, the supreme philosopher is the one in whom there exits (1) all, therefore the maximum, (2) the truest, (3) the clearest, (4) the most certain, (5) the most ardent, (6) the most based on reason, hence (7) the most certain, knowledge of qualities without the need for faith.
>
> (Baumgarten 1770: §260)

Referring back to what was demonstrated in the *Metaphysics*, Baumgarten recalls that we 'venerate' these same determinations in God, conceived of as the supreme being, and '[t]herefore God is the supreme philosopher' ('*Ergo deus est sumus philosophus*') (Baumgarten 1770: §261).[6]

Hence, for Baumgarten, there is ultimately only one philosophy that corresponds to and exhibits the real definition of this idea, namely the singular archetype found solely in the divine intellect, which realises in the maximum degree all possible perfections belonging to philosophical knowledge. This single, divine philosophy is also properly called an 'archetype', according to Baumgarten, because the philosophy of finite beings is bound by duty to its imitation (Baumgarten 1751: §92), making the former into the latter's proper ectype.[7] This language of archetype–ectype, which will be familiar to most from Kant's later adoption of it, is based on a passage in the metaphysics, which reads as follows:

> An EXEMPLAR is that to which the similar is intended [to be similar], and since it is an impelling cause (§342), it is a cause (§307), which is called exemplary, and what is caused by this is called the replica (ectype, copy). An EXEMPLAR which does not have another exemplar is an ARCHETYPE (original).
>
> (Baumgarten 2014: §346)

Philosophy, according to its real definition, is thus to be understood as the exemplar of exemplars, or the unconditioned exemplar of the most perfect philosophy, and since we are bound to its imitation, it is also the archetype of our philosophy. Moreover, because of its singularity, philosophy is not in truth a general or class concept, but rather an idea or a representation of a unique individual in relation to which all particular philosophies are to be measured. In this respect, philosophy shares in the nature of the divine being itself insofar as the latter is completely determined as an individual, and therefore in its existence, through its very concept, and at the same time provides the highest instantiation and model of perfection.

I will mention only two further, general features of this archetype here, although Baumgarten himself goes into quite a bit more detail in the text itself. Firstly, the archetype differs in structure in clear and essential ways from philosophy as developed among finite beings, i.e., from its ectype. According to Baumgarten, this is a necessary consequence of the essential difference between the finite and the infinite. Every finite being possesses less than the maximum of any reality, and hence is contingent, can be increased or diminished, and 'can be defined as a being that is not actually everything that it can be with respect to its internal determinations' (Baumgarten 2014: §260). Hence, the philosophy of finite beings is, at best, always in a state of development towards greater similarity with the archetype. This feature of human philosophy is essential to finitude as such and so must be denied of the infinite being. What is more, the concept of progression, which is essential to the nature of human philosophy, itself involves that of an order and a priority that must likewise be denied of the divine. And yet, if we must imitate the divine, then we must represent it, and since we can only represent matters through an order, we must attribute an order even to divine philosophy. But in doing so it will be necessary to remember that this representation is only one constructed by means of an analogy with what is finite, and thus one which attributes to the divine – though in an otherwise unknown way – the realities found in the finite (through what is called 'eminence'), while separating off and denying as much as possible, any associated negations.[8]

With this in mind, Baumgarten argues that the primary part of philosophy is not ontology, but rather archetypal theology, since it is most natural for the divine being to know best and with the greatest pleasure what is the greatest, namely itself. In a word, the primary object of the most perfect philosophy should also be the most perfect being. After this, the archetype of philosophy also contains an archetypal cosmology, psychology, and ontology, insofar as the divine being also knows completely and in the clearest way (hence not abstractly or generally, but most philosophically) every individual monad of every possible world, hence also all minds and all the representations within all minds, hence all possible things from every possible vantage point, and so all the eternal essences of all possible things.[9] One quirk of this ordering seems to be that archetypal ontology, which knows the full essences of all things, must be thought to precede the others, not because divine knowledge, like human knowledge, must proceed from the abstract to the concrete, but rather because, unlike in the human case, the concrete eternal essences are within God himself and so must be represented as having priority in terms of perfection (Baumgarten 1770: §264).

A second, notable feature of the archetype is that within it, these things must all be represented as known without any of the more notable negations belonging to human knowledge, hence in the most perfect way or '*maximus philosophicus*'. As Baumgarten explains,

> Divine philosophy knows no external experiences, abstractions, acts of attention, reflections, comparisons, combinations or our successive reasoning, insofar as these are imperfections, but is immutable, without increase or decrease, and hence most holy.
>
> (Baumgarten 1770: §269)

Nevertheless, apart from these negations, human knowledge also contains many realities or perfections, among which is the ability to know one thing based upon another, i.e., connectedness or groundedness. More perfect knowledge thus knows more things from more things, while the most perfect knowledge must be represented as knowing all things from all other things. By this use of analogy, the reality contained in the idea of connectedness found in human knowledge is retained while its associated negation, namely priority, is denied. To know all things in the most philosophical way is therefore to be able to see how each thing is as much the ground as the consequence of all other things, and hence 'the supreme philosopher sees all things flowing from all things' (Baumgarten 1770: §45). For simplicity, I will refer to this core principle of archetypal philosophy as the "equipollence" of grounds.

Remembering what was said above regarding the analogical ordering we nevertheless ascribe to divine knowledge, it is clear that Baumgarten embraces another core strategy of traditional theology, which lies in balancing a positive theology based upon analogy with a negative theology that denies that this same analogy, or really any, is able to adequately represent the divine; for Baumgarten, as we have seen, recognises that we must represent the divine knowledge and so we must ascribe some ordering to it by analogy with human finitude (though one reordered to better reflect its perfection and nature) and yet also, from another point of view, deny that this very ordering can adequately represent the divine. So in one sense we ascribe an order to archetypal philosophy, while in another we must deny any priority within it. This runs parallel to the fact that we must ascribe some primary essence to God in any scientific theology while recognising that no concept of the divine is truly prior to any other.

These essential differences between divine, archetypal philosophy and our human, ectypal philosophy is consistent with an important expansion found in the second edition of the *Logic*, where the nominal definition of philosophy is followed by a more determinate formulation of what here in the *Philosophia generalis* is called the ectype of philosophy. It reads: 'OUR PHILOSOPHY * (*philosophy insofar as it is constructed among human beings, or considered as a collection of disciplines) is the

science of several qualities in things known without faith: distributed into disciplines' (Baumgarten 1773: §38). Clearly, God's knowledge can be described in several ways, as theology, cosmology, psychology, and ontology, but it cannot properly be regarded as divided into disciplines, since a discipline, by its very nature, describes a practice for improving our imperfect capacities for knowledge and action. Hence, no matter how much the division of archetypal philosophy seems to resemble our human division of philosophy, it is crucial to recognise that the latter essentially reflects a division into disciplines, which in turn reflects the order most conforming to human imperfections and the means to their improvement.

2.2.2 *Metaphysics an Essentially Human Science*

Some, including myself,[10] have casually suggested that Baumgarten perhaps anticipates Kant and some of the latter's contemporaries in taking a subjective turn with regard to metaphysics. This turn, if indeed genuine, lies somehow in that portion of the definition of metaphysics that qualifies it as pertaining specifically to 'human knowledge'. As Baumgarten writes,

> METAPHYSICS is the science of the first principles in human knowledge.
>
> (Baumgarten 2014: § 1)

Yet, while it is true and demonstrable from an examination of the lecture notes that Kant developed his own definition of metaphysics by applying pressure to this exact point, i.e., to the question of how metaphysics is possible as a *human* science, I have always remained mildly sceptical about the extent to which this was what Baumgarten had in mind. I would now like to make the case for the thesis that Baumgarten intended to institute a certain sort of subjective turn not found in other philosophers, at least not in his fellow Wolffians, and that this is reflected in his definition of metaphysics. To anticipate my conclusion somewhat, I will argue that Baumgarten regards metaphysics as something belonging exclusively to human beings due to their finitude, and so not to God, who is infinite. In this respect, he is creatively drawing on critical elements and strategies already found in the traditions of positive and negative theology. And although this does represent a subjective turn generally absent in Wolff and his other followers, it remains fundamentally distinct from that of Kant, who instead restricts the validity of our concepts, in their theoretical application, to objects of experience and so denies any sense to them in a supposed transcendent application (although he concedes sense to certain theoretically transcendent concepts in their practical application).[11]

The first piece of evidence for this claim is indirect. In all of his works, Baumgarten fiercely applies the canons of definition, including that according to which '[a]ny note which is sufficiently determined by another does not enter into a definition' (Baumgarten 2014: 88). He believed that he was permitted and should forgo the usual practice of including derivative notes or marks,[12] which are otherwise useful in avoiding misinterpretation, since his writings were intended to be fleshed out in the lecture hall. Hence, if "human" is included as a mark in the definition of metaphysics, then undoubtedly Baumgarten regarded it as both an essential and a primitive mark of that concept. Note also that Baumgarten, as we have seen, does not qualify philosophy itself as human, except in its ectypal form. So whereas he does present a definition of philosophy that in principle is applicable to the divine being, he presents no such definition of metaphysics. Presumably then, if we take Baumgarten's definitions as seriously as he asks us to take them, then we must conclude that for him God can be the supreme philosopher, but not the supreme metaphysician.

But why would this be? Why would Baumgarten exclude 'human' from his definition of philosophy, only to include it as an essential mark of metaphysics? I believe a clue to an answer can be found in the preface to the third edition of the *Metaphysics*, where he responds to an unnamed critic who proposes that there is a contradiction in assuming the principle of sufficient reason (PSR) to be universal, since one thereby must posit both a first ground of all things and yet also that this ground itself has a further one. As Baumgarten explains,

> [W]e must always distinguish the ground from the ground that we specifically know by proceeding through every single thing. The notes of things that are relatively first, or first with respect to human knowledge (also to clear human knowledge), certainly still have a ground, although we do not know this ground in respect to the rest of its predicates in a way that would allow us to separate it sufficiently from the others. And hence there is always something prior to the first in clear and distinct human knowledge, which can only ever be known somewhat obscurely by humans. ...But the absolutely first being as such neither abstracts, nor reflects, and hence, since it knows all things most distinctly from everything else, it is never led back to absolutely first notes.
>
> (Baumgarten 2014: 80)

Here Baumgarten directly contrasts what he will later call ectypal and archetypal philosophy and, just as in the *Philosophia generalis*, denies the appropriate negations of the divine being while asserting the equipollence of grounds. But in addition, he now uses this contrast to explain how the

PSR can be true, although human metaphysics generally, and his metaphysics in particular, must always start from a first or absolutely primary principle. To put the argument in the language of the *Philosophia generalis*, Baumgarten here contends that within archetypal philosophy, since all things flow from all things, everything has a sufficient reason and there is never a true first in the chain. But in human philosophy there must always be a first, and indeed a first beyond which – given the essential limit attaching to human nature – our knowledge can never progress. Now, if there is no first concept or principle in archetypal knowledge, then it follows that there can be no first principles of such knowledge, and, consequently, there can be no basis for any conception of a divine metaphysics. On this understanding, the way of analogy requires the denial of a divine metaphysics, for the same reason it requires us to deny an absolute priority within archetypal philosophy. First principles are only needed by finite beings and so a science of such principles, i.e., metaphysics, is essential only to ectypal philosophy. We reach the same conclusion by observing that metaphysics contains essentially abstract knowledge and, as we saw in the *Philosophia generalis*, and again in the third preface to the *Metaphysics*, Baumgarten affirms that the supreme philosopher knows nothing of abstractions.

From this, we must conclude that Baumgarten takes the very possibility of a human metaphysics to be rooted in a kind of need that arises only because all finite beings, and hence also human beings, have an essential limit beyond which they cannot pass. The basis for such a claim is explained in the following paragraphs of the *Metaphysics:*

> To be a real being is a quality (§69) belonging to every being (§136). And since there is a certain number of realities in every being (§136, 159), every being has a certain degree of reality (§246, 159). Hence, this will either be the greatest, or not (§10, 247). And since that degree of reality in comparison with which a greater is possible, or that which is not the greatest (§247), is called a LIMIT (a boundary <*terminus*>, cf. §350, end, cf. §341), that which has a limit will be FINITE (cf. §341, limited). ... Finite beings have a limit, hence a degree (§248), and therefore a quantity (§246). Hence philosophical and mathematical knowledge of all finite beings is possible (§93, 22). The ESSENTIAL LIMIT of a given finite being is that limit beyond which it is impossible for there to be anything more in this being due to its own essence. The mathematics of non-extended things is the MATHEMATICS OF INTENSIVE QUANTITIES (§247).
>
> (Baumgarten 2014: §248–249)

By means of this passage, we can see how Baumgarten links the essentially human character of metaphysics, i.e., its basis in the finitude of human

nature, with the possibility of a mathematics of intensive magnitudes that articulates from our own finite point of view the relation of ourselves to the infinite. Hence, we can see that the very limit that makes metaphysics necessary is also what makes it possible for us to know our own limitedness, and thereby also the relation of ourselves to God and of our ectypal philosophy to the single, supreme archetypal philosophy.

In this manner, Baumgarten holds that God can be represented, though inadequately and with qualifications, as the supreme theologian, the supreme cosmologist, and the supreme ontologist, because these name classes of real things known by God, namely God himself, contingent beings, and essences, which in turn means that the knowledge of them is also a reality that must be ascribed to God analogically through eminence. However, because metaphysics itself is rooted in a negation and limit, the same analogical attribution of the perfections of knowledge to God requires the denial of it as a division of archetypal philosophy. Hence, the divine being cannot likewise be represented as the supreme metaphysician without detriment to his infinitude. Metaphysics therefore must be understood as referring essentially to a special group of principles that is necessarily first in our knowledge of things only because we are unable to know them fully adequately and immediately. On Baumgarten's account, then, the primacy of metaphysics should be seen as inseparable from its abstractness; for we must know things by means of intermediate representations, namely abstract concepts and principles, only because we are unable to know individual things fully adequately and immediately. It is a simple corollary to this, that if our knowledge is nevertheless to amount to science, then we must be able to begin from some set of concepts and principles that are (fortunately) immediately certain *to us*, although in truth they are also demonstrable in principle, or by God, from other things that, again *for us*, are forever furthest from certainty.

Two other pieces of evidence strongly support the essentially human character of Baumgarten's metaphysics. The first stems from his comments on the PSR in the third preface to the *Metaphysics*. As I have just argued, Baumgarten regards our need to comprehend things by reference to prior and indeed first principles, as based not in the nature of things themselves, but rather in the discursivity[13] and finitude of the human intellect. This view is directly reflected in his seeming indifference in this passage about whether the PSR be regarded as a first, indemonstrable truth, or instead as a derivative and demonstrable one. In response to criticisms of his proof of this principle, he notes that if one is not willing to accept the argument in §20 of the *Metaphysics* (which derives the PSR from the principle of contradiction), then one could just as well regard the principle as indemonstrable and self-evident. Not without exasperation, he retorts: 'If only these sorts of claims [i.e., to self-certainty] were never made about things

that are less evident!' (Baumgarten 2014: 78). Alternatively, if one wished, one could regard the principle as proven by, and so as following from, certain things found later in the system, which, as matters stand, are now presented as following from it. The exact way this principle is treated in his system, it seems, is based solely on a choice about how best to present truths and their connections in a way that conforms to the needs of the human intellect. Such flexibility in the manner of presentation can be seen as a direct consequence of the principle of the equipollence of grounds; for all truths in themselves are equally interconnected and reciprocally grounding and so every part of the system – including the PSR itself – can be regarded as a ground for all the other parts. It is for this same reason that Baumgarten is able to make the otherwise startling claim that if God did not exist, then the principle of contradiction would be false (Baumgarten 2014, §824),[14] although this last principle obviously forms the absolute bedrock, or 'absolutely primary' principle, of his metaphysics (Baumgarten 2014, §7).

The second piece of evidence lies in Baumgarten's analogous statements regarding human theology in the following passages from the *Metaphysics*:

> §816. The first concept of God is the internal perfection of God from which all the remaining internal perfections can thus be eventually deduced such that this very perfection cannot be afterwards deduced from another internal perfection of God by those desiring to avoid circular logic (§40, 39). Now, such a deduction of the remaining internal perfections is possible from the infinite perfections of God (§24, 49), since any given ground is the greatest (§812, 166), most sufficient (§169), and hence the unqualifiedly final (§170) and greatest essence (§171). Therefore, the first concepts of God are infinite, and any of these, when chosen to be the essence, is nevertheless the unique essence of: God (§40, 77).
>
> §817. Although there is in God the greatest (§808, 167) and maximally universal nexus (§172), and thus everything in God in the truest sense originates from everything else (§876), nevertheless it is easier for us to know the rest of his perfections from one perfection of God than it is from another (§527). Therefore, it is preferable to choose as the essence that perfection from which we hope to deduce the rest most easily (§816).
>
> (Baumgarten 2014)

Again, the specific character of our metaphysics, in this case of our natural theology, is based not on an order of priority found in things themselves, but instead on the way of thinking most suited to our human understanding. Furthermore, it is clear from these passages that the very fact that we

must choose any particular essence of God to be first, and so construct a *metaphysics* of God at all, is due only to this same finitude. But while we must construct just such a metaphysics to fulfil the need for a positive theology, we must also seek as much as possible to both recognise the equipollence of grounds and extend our knowledge of things so that we can increasingly (though always inadequately) understand the reciprocal ground of all things in one another. In this respect, the relationship between archetypal and human theology provides another example confirming that the need for metaphysics generally belongs only to human, ectypal philosophy.

Finally, the purely human character of our metaphysics follows logically from two doctrines already mentioned, which are exclusive to Baumgarten, at least with respect to the Wolffian tradition. Firstly, as we just saw, he purports to demonstrate that every one of the infinite concepts of God is his unique essence, from which all others can be demonstrated. This implies that God's actuality is also his unique essence. Secondly, Baumgarten also holds that if God were not actual, then the principle of contradiction, which is the absolutely first principle of metaphysics (Baumgarten 2014, §7), would be false.[15] Hence, the truth of the principle of contradiction, the ground of our entire metaphysics, could be seen as depending and following from God's actuality. Now, if we add to these two unique claims the doctrine that God also knows all things, including all contingent things, entirely from and through his own self-knowledge, then it follows not only that the absolutely first principle of our metaphysics is not the absolutely first principle of knowledge as such or in itself (since there is no such thing), but indeed also that infinitely many alternative forms of metaphysics are possible, although only a few may be possible for us and only one may be the best suited to the specific limitations of our nature.

2.3 The Role of Metaphysics

2.3.1 How Metaphysics Guides the Selection of a First Principle

As the first and fundamental human science, metaphysics evidently plays a number of essential roles in all other sciences and so within the scope of human life. Most of these are not unique to Baumgarten, nor important for understanding the reception of his philosophy. However, two in particular are such: the role that it plays with regard to the beginnings or principles of the sciences and with respect to their internal ends or perfections.

If the argument of the last section represents Baumgarten's considered view, then the selection of the principle of contradiction as the absolutely first principle of metaphysics is grounded solely in its unique suitability to play this role for our form of knowing. In this respect, its selection rests

on the philosopher's wise judgement, which itself must be based upon an application of the first principles of the mathematics of intensive quantities, including the metaphysical principles of the best.[16] Yet this is a feature attaching to all human knowledge, and hence should not be exclusive to metaphysics or to its own first principle. Indeed, due to the equipollence of grounds, all first principles of whatever human science should in some sense be a matter of such wise selection.

As surprising as this consequence might seem, it is readily confirmed and illustrated in Baumgarten's *Elements of First Practical Philosophy*. The purpose of the *Elements* is to provide a scientific treatment of the first principles of all practical philosophy, under the title of 'first practical philosophy', in a way analogous to how metaphysics provides the same for all human sciences as such (Baumgarten 2020: §7). Accordingly, practical philosophy is defined by Baumgarten as 'the science of the obligations of a person that are to be known without faith' (Baumgarten 2020: §1) and first practical philosophy as 'the science containing the first principles that are proper but also common to the rest of the practical disciplines' (Baumgarten 2020: §6).

Now, just like metaphysics, first practical philosophy must have its own internal or 'domestic' first principle, something analogous to the former's principle of contradiction. But what should this first principle be? Baumgarten extensively treats this very question, but two passages will suffice to capture his main line of thought. In §89, we read regarding the first principle of the right of nature:

> And even if (8) it may not be denied that the institution or selection of this sort of first principle, as in other disciplines, thus also in the right of nature in this sense, is something CHOSEN, ... still, just as nominal definitions, despite being chosen, are not left simply to a BLIND CHOICE, which would be to strive against reason on who knows what grounds, but rather follow a PRUDENT CHOICE, i.e., the best cognition of the best that there can be: thus also if there are many principles belonging to any given discipline or right of nature that you could institute as the first according to preference, the one to be preferred is that which is better among the rest according to a wise preference (§70).
>
> (Baumgarten 2020: §89)

Three things are notable here. Firstly, the seemingly open question in the first line about whether there are other possible first principles for this discipline was answered affirmatively in the previous paragraph.[17] Secondly, Baumgarten here explicitly regards this first principle as chosen, or as a matter of convention, in a manner perfectly analogous to how nominal

definitions are chosen, which was discussed above. Finally, he stresses that although the choice of a principle is indeed a matter of convention, it must be anything but arbitrary in the sense of blind or without good reason; indeed, it must be deliberately selected with the aim of providing the best possible principle, i.e., the one most conducive to realising the necessary perfections of this sort of knowledge.

Although Baumgarten's reference to the 'best' and to 'wise preference' here should be enough to indicate connection of the criteria for such a choice and the first principles of intensive quantities, §90 goes on to explain in detail that 'prudent choice' would settle on the principle that is most conducive not only to the achievement of those perfections specific to practical knowledge as such, but also to their achievement among human beings like ourselves, with all our flaws and mediocrity. In this respect, wise or prudent choice indicates selecting the principle that is easiest to understand and employ in demonstrations by those only 'moderately prepared' to undertake practical philosophy. The first principle is thus uniquely human in at least three respects: insofar as any principle must serve as first at all, insofar as this first principle should be adequate for allowing us to deduce everything essential to our practical philosophy, and finally insofar as it should be selected with an eye to the actual teaching and learning of the discipline among people of ordinary talent.[18] Most interestingly, Baumgarten cites the latter as a *reason* why the 'first principle of practical philosophy, and of the right of nature, which is a part of philosophy, ought to be demonstrable without faith', thereby indicating that the need for philosophy itself, and of first practical philosophy as a part of it, lies in the need to ground human life in that form of thinking most suited to influencing the most human beings in the strongest possible way. Presumably, then, it is based upon these very criteria that Baumgarten himself 'wisely' selects as the first principle of practical philosophy '*furnish the good to seek perfection as much as you are able*', which he equates with '*furnish the good that is to be known with certainty and without faith as much as you are able*', warning however that 'it should not for that reason be denied that any of these [i.e., other derivative principles in practical philosophy] can ever be considered primitive' (Baumgarten 2020: §91).

The virtuous circularity of Baumgarten's thinking here should not be overlooked. To furnish the good and to seek perfection, which is our duty, we must first know what goodness and perfection are for us, what degree of these we possess, and what increasing this degree as much as we are able to looks like. Consequently, this first principle makes it an obligation to *develop*, *know*, and *apply* the mathematics of intensive quantities in our own lives, while that same mathematics provides the ground for choosing this principle as the best, or as the one most suitable to our own finite nature.

From this examination of the rules for selecting a primary principle for first practical philosophy, which Baumgarten discusses far more extensively than any other, we are able not only to confirm and illustrate what we saw earlier regarding the selection of the principle of contradiction as the primary principle of metaphysics, but also to better understand how the selection of all such principles – insofar as it aims at perfecting our knowledge and so ourselves, and so at imitating the divine in a way suited to human finitude – constitutes a genuine ethical duty.

2.3.2 *How Metaphysics Guides the Formation of Any Complete System of Science*

The choice of a first principle thus rests on a judgement with regard to what is 'best', and so must depend upon a scientific assessment that the principle, in comparison with others, leads best to a certain end, namely to the greatest realisation among human beings of the perfections of a given science. Now, although the ideal might be a complete system of perfectly demonstrated knowledge, human beings, like all finite things, are subject to limits, one of which is that the vast majority of our cognitions must remain undemonstrated, confused, and sensory. What is more, the specific laws of nature, and so also of practical philosophy – a knowledge of which is required for us to know and pursue what is best – are themselves dependent upon God's own inscrutable but nevertheless 'wise' choice.

As I have explained elsewhere,[19] the formal features of this divine choice of laws can however be grasped through a specific set of principles, found in the *Metaphysics*, which define what is natural and show that God gives priority to natural over supernatural order, but also spell out the conditions under which the latter would in fact obtain. What this means for our construction of any particular science is that we should reasonably expect its laws to conform to the most harmonious order that can be known from the *natures* of individual things and from the *natural whole* to which they belong; for every natural order – individual and natural – has its common norms (Baumgarten 2014: §472) and, all else being equal, God prefers what conforms to that order.

Now, as Baumgarten explains, 'the collection of the laws of the order of nature is the RIGHT OF NATURE, IN THE BROADEST SENSE, whose parts are the laws and rules of motion, and the laws of the nature of spirits' (Baumgarten 2014: §472). The metaphysical priority of natural over supernatural orders, combined with the mathematics of intensive quantities, thus leads to something like what Kant would call a regulative principle for investigating the right of nature, broadly considered, and so for determining its further particular laws. In constructing any system of the right of nature (which includes both physics and practical philosophy),

we should be guided by an expectation that the law harmonising most fully with those laws of nature already known and with the most perfect possible whole of natural law will also be a true law of the right of nature, broadly considered. This is because – given that God has prioritised natural order, which is knowable by human reason – he has established this law in order to realise that very harmony and thus has done so with the kind of foresight (or with what Baumgarten will also call 'vision') that human reason can have insight into, at least in principle. This shows yet another way in which metaphysics provides a guide for wise judgement, this time not with respect to first principles, but instead with respect to determining the laws of order governing any systematic body of natural knowledge.

Baumgarten's *Elements* again provides a perfect illustration of metaphysics playing this unique role. That specific part of the right of nature, taken in the broadest sense, which comprises 'the collection of natural laws that obligate human beings is NATURAL RIGHT, BROADLY CONSIDERED' and includes 'both internal and external moral laws' (Baumgarten 2020: §65). This subsumption of moral laws, or of our moral nature, directly under the right of nature, broadly considered, has three fundamental consequences for the form of any proper system of practical philosophy. Firstly, laws obligate through rewards and punishments and natural laws through natural rewards and punishments, which, though chosen by God, follow and can be known from the natures of mundane things. Since, all else being equal, God prefers natural over supernatural order, he also prefers to obligate through natural rewards and punishments. This means that 'wise' judgement will reliably conclude from the natural consequences of a type of action to a specific law, i.e., a duty, of its commission or omission. Whence, there arise two formal laws from which many other particular laws can be inferred through wise judgement: 'The law of nature is: *commit whatever promises the most and greatest rewards, and omit its opposite*' (Baumgarten 2020: §111); 'The law of nature is: *omit what threatens the most and greatest punishments, and commit its opposite*' (§120).[20] Likewise, since human law has vision – i.e., is founded in conformity with a knowledge of what would be best – to the same extent that it agrees with divine laws, and, furthermore, since the above regulative principle informs us that divine laws have natural rewards and punishments, it follows that the correctness of existing or proposed human laws can be confirmed by the existence of natural rewards and punishments for the very same acts (§111, §121).

A second consequence of this subsumption of moral nature under the form or right of nature as such is that it allows us to bring to bear several other metaphysical principles for placing any actual system of natural right within the broader context of the archetypal system of moral laws,

and so for gaining an insight into the former's limitations as well as into the goal towards which we ought to strive in its development through imitation of the latter. The true system is of course also the 'best', where the precise sense of this word is explicated by the mathematics of intensive quantities. Now, due to the same finitude that prevents us from ever possessing the archetypal philosophy, we also can never fully possess the best system of moral philosophy at any actual moment, nor can we ever know clearly and distinctly all things that pertain to practical philosophy (Baumgarten 1741a: §5). Hence, the whole system can be divided into the territory known by 'a given human being, or even the whole human species' and the unknown territory (Baumgarten 2020: §95). Now, of the known territory, part is known by reason; and this is possible precisely because the right of nature, itself based upon the divine preference for a natural order, is what is knowable by reason. But the same divine preference leads us to expect that what is not known to reason is yet such as could not only be known to it in principle, but is also supremely knowable in itself and the most suitable object for maximally philosophical knowledge. Now, in addition to reason, we also possess various faculties for representing the laws connecting things, i.e., their nexus, indistinctly or sensitively, but still clearly, which faculties constitute what Baumgarten terms the 'analogue of reason', or in legal theory, is called 'experience'. It follows, then, that the known territory can be further divided into that of science, known by reason, and that of sensory experience, known by means of the analogue of reason. This knowledge of the terrain of practical philosophy, combined with the duty to '*furnish the good and to seek perfection*', leads Baumgarten finally to affirm a principle demanding of us that we perfect our own practical knowledge by extending, as far as possible, the territory of the known into that of the unknown and the territory of science into that of experience (Baumgarten 2020: §97).

A third consequence concerns how we ought to interpret law, given that the whole of genuine law should form such a perfectly harmonious whole, all of which can be known to the supreme philosopher, and only some of which can be known naturally by human reason. As we saw above, the laws governing free beings should form a system containing in the greatest possible degree those perfections proper to practical philosophy. This leads to the expectation that every law will stand in the greatest possible nexus of ground and consequence relations with all other laws and things in nature. Now, in the *Elements*, Baumgarten explains that 'the RIGHT and PRUDENCE of a legislator as such are NOMOTHETIC' (Baumgarten 2020: §105), meaning it is these things – right and prudence – that qualify any promulgation of a norm to be a genuine act of legislation. For this reason, 'LAWS strictly considered according to nomothetic rules POSSESS VISION broadly considered, and those contrary to the same are BLIND, broadly considered' (§105). God has these things in the supreme degree and hence he is the supreme legislator (§100). The true laws of natural right, then, are never blind, but instead have the greatest vision. Thus arises the special rule for interpreting law: '*take as true and genuine the literal sense of positive laws that, if it were true, would harmonise best with the nomothetic rules, until the contrary be understood, or: do not interpret any positive law as blind without necessity*' (§179). According to this rule, any judge interpreting positive human law must again possess wise judgement, which is a faculty guided by a knowledge of the rules of perfection (and so informed by the mathematics of intensive quantities), of the distinction between the natural and the supernatural, and of the rules according to which God prioritises natural over supernatural means – in a word, must be guided by metaphysics. This rule in particular directs us to use such metaphysical knowledge to insure that human law is always interpreted in a way that aligns as much as possible with what is truly legislative.

2.4 Conclusion

Previous scholarship has established that part of Baumgarten's originality lies in the way he connects certain core doctrines regarding perfection and goodness, which are more typical of Leibniz's thought, with specific parts of the Wolffian systematic metaphysics popular in his own day. In this chapter, I have shown that these connections are not isolated and unmotivated, but instead stem from the very heart of Baumgarten's well-considered conception of the nature and role of metaphysics as a uniquely human science. According to him, this discipline is supreme in human knowledge, not because it corresponds to what is first in divine knowledge, but instead because it provides the most basic, most indispensable, and most appropriate instrument for perfecting human knowledge and thereby also the human being. Metaphysics is able to do this for two reasons: (1) Its own first principle has been selected for this very purpose and (2) that chapter of it concerning the mathematics of intensive quantities provides the criteria for wise or prudent judgement, i.e., for judgement regarding the degree to which anything approaches what is truly best. If this knowledge is then combined with another part of metaphysics, namely that treating the laws governing divine choice, then there follow at least three further formal principles for the development of all other sciences, as illustrated in our examination of the *Elements*. These principles direct us in discovering and confirming laws of nature, in conceiving and extending the boundaries of a given science, and in interpreting the existing body of scientific knowledge. Finally, we have seen that practical philosophy demonstrates that developing and teaching this sort of metaphysics – one not based on faith – is itself a duty for those who are able, since, like all human beings,

they are determined to '*furnish the good or seek perfection as much as [they] are able*' (91). In this respect, Baumgarten argues that some of us have a natural as well as divine duty to become philosophers and to teach the type of practical philosophy that is well-grounded in his metaphysics and so appropriate to the moderate talents of human nature.

Notes

1 Aichele 2010 defends a sharp distinction between Wolff's and Baumgarten's conceptions of philosophy based upon differing views regarding its proper object.
2 See Schwaiger 2017 for an account of the origins of the first edition of the *Logic* and its relation to subsequent editions.
3 Compare Baumgarten 1741b: 12.
4 A typical example reads: '§185 The smallest perfection is only one smallest agreement of the fewest and smallest beings in one smallest being (§94, 161). Hence, the more and greater beings, the more beings in which they agree and the greater they are, the more often and the more closely they agree, the greater is the perfection (§160), until it is the greatest perfection, which is the greatest agreement of the most and the greatest beings in one (§161, 169). Moreover, since the supreme perfection is thus maximally composite (§183, 96), simple perfection, however great it may be, is nevertheless not the greatest (§96)'.
5 Compare Baumgarten 1741b: 12, where a similar list of determinations is developed.
6 Cf. Baumgarten 1741b: 12–13.
7 As Baumgarten explains in the passage cited, this is properly an *ethical* duty based upon the natural law which bids us to increase our perfection. Striving to imitate the divine archetype involves increasing the perfection of one's own intellect and hence falls under the duty to perfect ourselves.
8 The well-known 'way of analogy' is endorsed and explained in Baumgarten 2014: §§826 and 827. For a recent discussion covering Baumgarten and Kant, see Chance and Pasternack 2018.
9 There is obviously an order here. What is the basis of that order, if there is no order in God? It must be the order in which we are alone able to represent God most properly to ourselves.
10 See Fugate 2015.
11 In fact, the matter is still more complicated; for Kant does admit a limited sense to theoretically transcendent principles in a theoretical respect, and indeed does so using the device of analogy (which he employs in his practical philosophy for the same purpose), but this sense is restricted to the regulative function that metaphysical concepts can play in empirical research and in no way (not even inadequately) represents the supposed metaphysical objects of these concepts.
12 For the definition of a mark or note as 'the ground of distinction in a thing', see Baumgarten 2014: §67.
13 That is, the essential reliance on chains of reasons in which one member is prior to another.
14 For if every truth both implies and is implied by every other truth, then they are all equivalent and so the denial of any one implies the denial of the others. The force of this claim, however, is to emphasise that the truth 'God exists', which is generally held to be less certain than the principle of contradiction, should be regarded just as primary as the principle of contradiction, since there is no priority among truths.
15 This is the second principle unique to Baumgarten. He explains his acceptance of it in Baumgarten 1741b: 65–68.
16 How this precisely works remains unclear and deserves further study. At the least, it seems that the selection of a first principle such as that of contradiction would rest on a survey and comparison of its perfections (its self-evidence, clarity, distinctness, its 'fecundity' or adequacy for deriving all other principles from it, etc.) with that of all other potential principles, informed by the mathematics of intensive quantities.
17 §88 reads in part: 'If some specific principle in our system of demonstrating the right of nature is the first of the domestic principles, then do not let it be inferred that no other principle could also be correctly instituted as first in any other series for demonstrating the right of nature. For, what is first in a certain series of demonstrations of domestic principles can perhaps be deduced in a slightly modified chain of conclusions from another domestic principle, and this, then, only from propaedeutic principles'.
18 In the first preface to the *Metaphysics*, Baumgarten himself claims to have adopted this as a law for his own teaching: '[T]here is not reason why I should regret the very rule that I have resolved I must follow, since my task has been not solely to learn, but also to promote learning: *To regulate whatever I say so that a person of average intelligence is able to know clearly and perspicuously what I mean when mildly familiar with the doctrines that I offer and that must be taught, and when only mildly interested in that which I treat and that must be learned.* Weighing whatever I am about to expound to YOU according to this law, I will neither seize upon novelties because they are recent, nor spurn the old because it seems obsolete' (Baumgarten 2014: 92). Also in the *Philosophische Brieffe*, after explaining the perfections of the highest philosophy, Baumgarten warns that although we should pursue this ideal, we should not presume to ever match it. Rather, we should measure our philosophy to the fact that 'the best philosophers among those that are mortal are the mean between fools and the all-too-wise' (Baumgarten 1741b: 12). If my interpretation is correct, then the basis for this law actually lies in the duty to employ wise choice, informed by the finitude of human nature, of the best and most suitable form of education.
19 Fugate 2018, especially 150–155.
20 For this to hold, the consequence must be naturally knowable from the action, not just follow upon it. Baumgarten warns in particular of subreptive inferences possible here as well as of the fallacy of *post hoc, propter hoc*. See Baumgarten 2014: §548; 2020: §§113 and 122.

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3 Lambert on the Certainty and Generality of Metaphysics and Geometry

Katherine Dunlop

3.1 Introduction

The topic proposed for the 1763 Berlin Academy of Sciences essay competition was a comparison between metaphysics and geometry. Competitors were specifically asked to pronounce whether metaphysical truths 'admit of distinct proofs to the same degree as geometrical truths', and, if they answered no, to explicate the nature and degree of metaphysics' certainty, and say 'whether this degree is sufficient for complete conviction' (Walford and Meerbote 1992: *lxii*). The Academy's brief did not state or imply that such highly distinct proofs, and certainty of the same nature and degree as geometry's, are necessary to qualify as a science. Yet three of the most illustrious essayists – Immanuel Kant, Johann Heinrich Lambert, and the eventual winner, Moses Mendelssohn – began their essays by remarking on the faddishness of metaphysical theories, and suggesting that metaphysics will never achieve the status of science as long as it lacks the evidence of geometry.[1]

Mendelssohn explicitly considers that philosophy might be said not to 'fulfill the requirements of a science' (1764/1997); his own view, however, is that metaphysics is a science and indeed as certain as geometry, just not as perspicuous in its reasoning. In his essay, Kant refers to metaphysics as a science, but there are hints of the questions he will go on to raise as to how and whether metaphysics, as traditionally understood, qualifies as science.[2] In contrast to both, Lambert appears to take metaphysics' status as a science for granted; and in sharp contrast to Kant, Lambert holds that philosophy should emulate the method of mathematics. In this respect, Lambert's view diverges less than Kant's from that of Christian Wolff, whose claim to institute mathematical method in philosophy prompted the Academy to pose their question.

But Lambert faults Wolff's understanding of mathematical method, finding it incomplete. According to Lambert, Wolff grasps how the deductive ordering of mathematics' propositions conduces to its certainty, but

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