

Integral personalism and neuroethics: informing the Foundation

*Personalismo integral y neuroética:
informar a la Fundación*

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Abstract: Integral personalism is a contemporary philosophical current that has begun to influence many areas of thought, including bioethics. This article examines one particular aspect of bioethics, the field of neuroethics, and considers how the key concept of categories specific to persons can inform neuroethical theory and practice from its foundation.

Keywords: categories, integral personalism, Juan Manuel Burgos, neuroethics.

Resumen: El personalismo integral es una corriente filosófica contemporánea que ha comenzado a influir en muchas áreas del pensamiento, incluida la bioética. Este artículo examina un aspecto particular de la bioética, el campo de la neuroética, y considera cómo el concepto clave de categorías específicas para personas puede informar la teoría y la práctica de neuroética desde su base.

Palabras clave: categorías, personalismo, personalismo integral, Juan Manuel Burgos, neuroética.

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Introduction

Neuroethics is a relatively new and growing field within bioethics that addresses ethical issues that arise in connection with neuroscience, broadly considered as research, theory and practice¹. While many of the issues pertinent to neuroethics have existed for some time, the formal origin of neuroethics as an academic field is often traced to a 2002 conference in San Francisco, USA, “Neuroethics: Mapping the Field”, hosted by Stanford University and the University of California, the first such gathering in which sustained and specific attention was given to neuroethics as a specific area of inquiry². Of note, the majority of the presenters at that conference were researchers and physicians, not bioethicists³. This has given the field a specific character and perspective that we will examine below. The International Neuroethics Society was founded in 2006 with the stated goal “to encourage and inspire research and dialogue on the responsible use of advances in brain science”⁴.

The character of the participation at the 2002 conference continues to mirror the field of neuroethics, a majority of individuals publishing in the field come to neuroethics with a solid background in neuroscience, but a very limited background, if any, in ethics. The field of neuroethics, if it is to deal adequately with the ethical issues in neuroscience, must include researchers who combine expertise in both fields. As Alasdair MacIntyre has written, when two disciplines come into contact, they will require a common language to communicate, which initially means individuals who speak the language of both disciplines, in this case the languages of neuroscience and ethics⁵. Historically, this has resulted in a solid neuroscientific foundation to the field of neuroethics, while the ethical contribution tends to be less deep.

The purpose of this article is to examine the field of neuroethics in light of the insights of integral personalism, in particular the integral personalist concept of *categories specific to persons*, to see how this can act as a needed corrective to the field of neuroethics, both in its ethical

¹ For an overview of some key neuroethical issues, see M. FARAH, *Neuroethics: an introduction with readings*, MIT Press, Cambridge 2010.

² S. J. MARCUS, *Neuroethics: Mapping the field*, The Dana Press, New York 2002.

³ Some exceptions: Arthur Caplan, PhD, bioethicist at the University of Pennsylvania, Albert R. Jonsen, University of Washington, Jonathan Moreno, University of Virginia, Eric Parens, The Hastings Center and Paul Root Wolpe, University of Pennsylvania. Patricia Smith Churchland also spoke at the conference.

⁴ International Neuroethics Society, <https://www.neuroethicssociety.org/about#mission>.

⁵ A. MACINTYRE, *Three rival versions of moral enquiry: encyclopedia, genealogy and tradition*, University of Notre Dame Press, Notre Dame Indiana 1990.

and neuroscience aspects. To do this, I will first briefly examine the current of integral, personalism in light of this specific feature of categories. Second, this concept or category will be brought into dialogue with the fields of neuroscience and neuroethics in terms of their vision of the human person (philosophical anthropology). Third, the personalist view of person will be brought to bear on the discipline of neuroethics.

1. Integral personalism

The integral personalist philosophical tradition developed by Juan Manuel Burgos has sought to integrate the best aspects of both classical and modern philosophical thought as it relates to the specific question of persons⁶. It is one particular aspect of integral personalism that will be focused on here, that of the necessity of moving from categories specific to persons, as an essential element in establishing a sound neuroethics.

1.1. Categories and "The Greek Ballast"

Western scientific thought is still beholden to Aristotle in ways that many scientists do not realize. Greek patterns of thought are pervasive in western culture, including in the field of science as it touches on concepts of human nature and personhood. Aristotle the biologist understood human beings as the most perfect beings in the natural world (*kosmos*), as we are characterized by rationality⁷. In the early classical tradition, we

⁶ As an overview of integral personalism is provided elsewhere in this issue of *Quién*, I will focus below on one particular aspect of Burgos' personalist view, that of categories specific to persons. For an overview of integral personalism in English, see J. M. BURGOS, *An introduction to personalism*, trans. R.T. Allen. CUA Press, Washington DC 2018.

⁷ There are several terms here that have rich and diverse meanings that should be clarified for the purposes of this paper: *nature/cosmos*, *animal*, and *rationality*. When Burgos speaks of the Greek Ballast, he speaks of these terms as they were understood initially within the sphere of Greek philosophy, and then considers them in relation to a modern conception of person. Aristotle conceived of everything in existence as being of the natural world, the cosmos, "The Universe then is a system made up of heaven and earth and the natural things which are contained in them" (ARISTOTLE, *On the Universe* 391b1 9-10). Everything, including persons, are understood as part of the whole cosmos: "By nature the animals and their parts exist, and the plants and the simple bodies (earth, fire, air, water) –for we say that these and the like exist by nature–" (ARISTOTLE, *Physics II*, 192b1 10-11). Soul, for Aristotle is "in some sense the principle of animal life" (*De Anima* I 402a 7). Aristotle's concept of person, expressed in his conception of the soul, exists entirely within the domain of nature –the notion of a soul created ex nihilo by God in the Christian sense is absent–. As persons are animals of a particular type, their souls must be described in animal categories, as Aristotle does in *De Anima*, keeping in mind that *De Anima* can be understood as a continuation of his *Physics*, soul being a natural phenomenon (on this point see MARIAS, *History of Philosophy*, 78). Man is an animal that possesses *logos*, reason (MARIAS, loc. cit. 137). In Scholasticism, the term *logos* is applying to the second Person of the Trinity, Christ, the Word of God, and the human soul is viewed as a nonmaterial aspect of persons that lives on after bodily

are not persons, per se, in terms of how the notion of person would be developed in the first centuries of Christianity, but rather biological animals distinguished by a specific capacity. We are, from start to finish, a part of the animal kingdom, and part of the wider cosmos. This pervasive perspective –this category of thought– is biological. Human persons are placed in a specific category, and all thought and investigation of persons happens within these boundaries. Categories of thought can have different effects. They can sharpen our vision, but they can create conceptual blinders, limiting our understanding by preventing us from attending to aspects of personhood not available to animal categories of thought.

The problem, then, with employing categories specific to animals (i.e. biological categories) to understand persons is that they obscure what is most specific to being persons by creating presuppositions that effectively undermine a more robust vision of who we are. Animal categories of thought and investigation can highlight those aspects of persons that are similar to what is found in the animal world, such as the organismic dimension of persons, though only to a point. Categories combined with the presuppositions of empirical investigation (e.g. a physicalist/deterministic vision of reality), can act as constrictors of vision in that once an aspect of person is thought to be completely described through a specific methodology that may be viewed as comprehensive even when this is not the case, there appears no need to look further. Consequently, animal categories, combined with an empirical perspective that understands the scientific method as the only valid way to generate knowledge

death. In addition, the notion of creation is introduced through the Judeo-Christian tradition, creation by a God who exists prior to all created things. Human beings are created by God in the *imago Dei*: “the life of man, as being the most perfect grade”, is not said to be produced, like the life of other animals, by earth or water, but immediately by God” (I, Q.72, ad 1). Aquinas will view the person in light of Boethius’ definition of person as an individual substance of a rational nature, and the name person points to “rational substances” (I, Q. 29, A. 2). Christian tradition grounded in creation by God and the creation of the person in the image of God gives rise to the notion of person that will be effective through much of western history. Twentieth century personalism will refine this notion to reveal the distinctly personal features of person, features not visible from the perspective of animal models of person, features that are captured in the Burgos model at the spiritual level: personal love, capacity for reason that includes but also transcends sensation and perception, aesthetic experience, freedom as self-determination, etc. Rationality, when mentioned in this essay, refers to the fully human capacities of persons, capacities univocal to persons, that is, not replicated in the animal kingdom, and knowable only from the perspective of persons and through fully human powers of knowing. Human rationality, as broadly construed in the personalist tradition, includes human affectivity and human dynamism in the knowing process, overcoming the tendency to view human affectivity as an enemy or inhibitor of clear reasoning (see Dietrich von Hildebrand, *The Heart*, on this history of suspicion with regard to affectivity). Finally, as ethical topics will be addressed below, animal models of persons do not allow a place for the type of knowledge essential to ethical reasoning: moral knowledge, that is our knowledge of good and evil, and of moral norms.

(the perspective characterized as scientism rather than science), create a reductionistic approach to understanding persons, seeing us as animals of a specific kind to be investigated as such, and nothing more.

Why do these conceptual limitations exist? They have been handed down to us through the long history of philosophy (the Greek vision of “rational animals”) and combined with the methodology that developed early in the scientific revolution –the empirical method–, which embraced the Greek biological vision without recognizing its limitations. Furthermore, the western intellectual tradition evidences a certain suspicion about about essential aspect of persons, affectivity, which is also an integral part of our knowing. To reduce the word “rational” to disconnected intellectual process alone is to embrace a fragmented vision of human rationality, which fails to integrate the affective dimension of persons into our knowledge of the world, and the valuing of truth, and removes affectivity as a source and way of knowing. Reason, for persons, also has a transcendent aspect, reaching beyond our individual interiority outward and upward, to know and embrace other persons, the world, and God.

What are these limitations, and why is it vital that we recognize them? Integral personalism has highlighted the fact that there are aspects of being persons that are univocal to us, and that cannot be investigated, explained or understood by reference to animal models. How can we know this? By expanding the methodology of investigating persons⁸. As Burgos writes, the dynamic structure of persons “is profoundly and radically different from that of animals, and for that reason, it [the structure of persons] cannot simply be given a dynamic structure whose origin is based on biology. A deep reworking is necessary”⁹. Burgos has termed the theoretical vision of persons grounded in Aristotelian thought and the wider ancient world view of ancient Greece, the “Greek Ballast,” that is, a conceptual burden that prevents us from looking to what is specific and unique about persons, a theoretical vision trapped in animal categories of thought. It is impossible, in light of such an obstacle, to develop a conception of person that can include aspects we have in common with the animal kingdom (though these need to be transformed in

⁸ Note that the word “expanding” is most important here. Integral personalism, and personalism in general, does not reject the empirical method as a means of investigating the natural world, including aspects of persons available to such methodology –the body, biological processes, etc.– What personalism does do is recognize that the empirical scientific method cannot be magnified into scientism and its presupposition that this is the only way to generate valid, reliable knowledge.

⁹ J. M. BURGOS, *Repensar la naturaleza humana*, Ediciones Internacionales Universitarias, Madrid 2007, p. 63.

light of personhood), and to move to a vision of person that is accurate, holistic, robust, comprehensive¹⁰.

1.2. Categories specific to persons

What then, does it mean to think in categories specific to persons, and how can it lead us to a better, more accurate and true vision of personhood? Drawing on the best aspects of both classical and modern philosophical thought, integral personalism has developed a vision of person that allows us to see person in a more comprehensive light. This vision is captured in the integral personalist model of person:

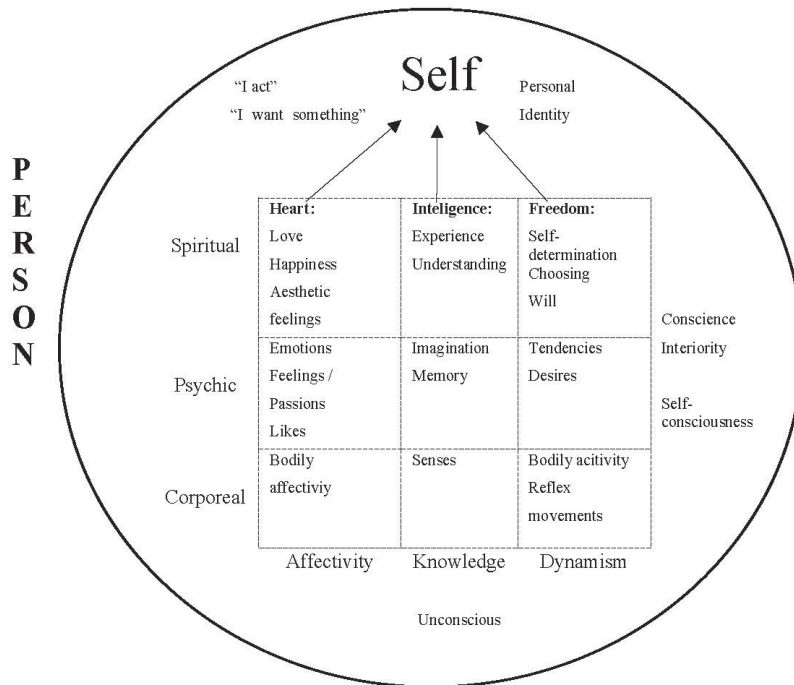


Figure 1. Integral Personalism Model of Person¹¹

¹⁰ I.e. a model free of the Greek Ballast. Knowing, for persons, is a process of the whole person, not merely intellect alone, and embraces all aspects of persons, body, psyche and spirit.

¹¹ Burgos model of person used by permission of Juan Manuel Burgos. It was first published in K.P. MOLLINEDO, *El diagrama de la persona según Burgos y su aplicación psicoterapéutica*, Instituto de Ciencias de la Familia, Universidad Galileo, Facultad de Educación, Guatemala 2007.

As is the case with conceptual models in general, an examination of the details of the model can serve as an explication of the vision it attempts to capture and communicate. It is my contention here that this model of person can serve two purposes. First, it provides a more comprehensive and accurate vision of the human person than is available to contemporary neuroscience, and second, it can serve as a hermeneutic for examining the limitations of the same scientific vision. The end result of description and analysis, then, is a more comprehensive and accurate vision of persons, one that can be brought into the service of neuroethics¹².

The first point to consider is the model's adequacy to persons. This touches on the finished vision, but also on the methodology by which such a vision is achieved. Integral personalism has developed a particular mode of investigation, termed *integral experience*, which begins with, and remains with direct investigation of persons rather than seeking to examine persons in light of other conceptual models, and is thus a rejection of the Greek Ballast and its conceptual limitations.

The method of integral experience includes, but is not limited to, knowledge that comes to us through our senses, as Lockean or Humean models would have us believe¹³. Rather than beginning with conceptual categories, though, this method proceeds from a direct examination and analysis of human experience, and recognizes that our direct experience of the world and of ourselves experience includes sensory experience in the empirical sense, but also has cognitive and affective aspects simultaneously from the beginning as well¹⁴. Human experience is the experience of *persons*, that is, the experience of the whole person, which is both primary and original, and which has both subjective and objective aspects, a living, conscious process of the whole person, which can then be

¹² The model has been presented in detail in several of Burgos' works, especially in J. M. BURGOS, *Antropología: una guía para la existencia* (5^a ed.), Ediciones Palabra, Madrid 2013. The reader is referred here for a more comprehensive discussion of philosophical anthropology, as this article will remain focused on the specific issue of categories specific to persons.

¹³ See J. M. BURGOS, *Antropología*, p. 19. An overview of the method of integral experience can be found in J. M. BURGOS, *Integral experience: A new proposal on the beginning of knowledge*, in J. BEAUREGARD AND S. SMITH (ed.), *In the Sphere of the Personal: New Perspectives in the Philosophy of Persons*, Vernon, Wilmington DE 2016, pp. 41-58. The model is presented in detail in J. M. BURGOS, *La experiencia integral*, Palabra, Madrid 2015.

¹⁴ In what follows, including the simultaneous subjective and objective aspects of human experience, Burgos draws explicitly on the work of Karol Wojtyła, whose methodology is presented in outline in *The Acting Person* and developed to a much greater extent by Burgos in *Experiencia Integral*. See K. WOJTYŁA, *The Acting Person*, trans. Andrzej Potocki, D. Riedel, Dordrecht 1979, pp. 3-22.

processed, consolidated and explored leading to understanding, which can then be expressed in a more formal way for the purpose of sharing knowledge understanding in a systematic way marked by critical understanding at the level of science and philosophy, and which recognizes the communal aspect of the sharing and development of knowledge at each of these levels¹⁵.

When this methodology is applied directly to persons without the intervening presence of conceptual models drawn from animal categories, a different and fuller vision of person emerges, one that is capable of capturing aspects of persons not available to animal models. The model contains nine different aspects of persons, views as an integral whole –there is no person without body, without knowledge, without affectivity, and there is no person without corporeality, psyche and spirit–. What emerges from the model, and that simultaneously provides a further method of analysis and evaluation of other philosophical anthropologies, is that *each aspect of the person is a category specific to persons*. What does it mean to say this?

First, it means that the presuppositions of animal models must surrender to and be replaced by a fuller vision that takes into account what is univocal to persons. Consider the body. Animal models of neuroscience approach persons from the physical, material and biological, recognizing the workings of cause and effect as well as stimulus-response in living organisms. These categories can account for animal instinct and the programmed ways in which animals respond to stimuli in their environment for survival and propagation. Animal models, however, come to their stark limits here. Is this all that can be said of the human body? Integral personalism speaks not simply of bodies, but of *corporeality*, in recognition of the fact that a personal body has similarities to animal bodies but is in reality something quite different. At the most basic level, animals do with their bodies what they must –lions do not commit premeditated murder; they kill their prey and eat it, birds build nests, etc.– Persons, however, are not completely bound by the category of animal instinct. We can also do what we will, that is, we can act dynamically with self-awareness, knowledge and freedom, a reality absent in the animal world. We can choose to follow a biological impulse or not. I can be hungry, but if I am talking with a friend in distress, I postpone eating to be of help to my friend. The notion of corporeality recognizes our physicality, but also recognizes an anthropological or personal

¹⁵ *Ibid.*

dimension of our bodies. A human face conveys far, far more than can be conceived of in animal models –relationship, joy, surprise, fear, the whole range of human emotion, thought, and interpersonality–. There are also phenomena in the personal world without precedent in the animal world: our appreciation for beauty and its impact on us, in the world or in our personal relations, and in our aesthetic sense, clothing as a means of showing cultural identity, belonging and self-expression (there is no Milan fashion week in the animal kingdom); corporeal contact, our capacity for touch is a deeply personal reality that is a source of communication and meaning. A relationship between lovers that included no physical contact and intimacy would be viewed as quite strange, as deficient in a deep way. Human touch conveys intimacy and shares the deepest aspects of our interior lives¹⁶. The body, then, means much more than the physical, biological, organismic aspects of the person. It includes these but encompasses much more; it is shot through with personhood.

2. Persons in the field of neuroscience

The field of neuroscience is a child of the discipline of biology. It examines the structure and function of the human brain and how this gives rise to behavior. Contained within the presuppositions of neuroscience are the same presuppositions that undergird the hard sciences, physics, chemistry, biology, and all other contemporary disciplines that move from a similar empirical framework, such as psychology, sociology, and other disciplines insofar as they employ empirical methodology, such as law, economics, history, etc.

What this perspective means for neuroscience, and for the ethical considerations that arise within neuroscience, are that the human person is conceived of from beginning to end as an animal, in biological categories that understand us as a part of the natural world, differing from other species only in limited ways, but not in essence. Animals, for the neuroscientist, comprise human and nonhuman animals. In other words, *neuroscience is deeply informed, and limited by, the Greek Ballast*. And it is here that integral personalism becomes a hermeneutic tool in which this vision can be examined and weighed against that which is univocal to persons.

¹⁶ This is a summary of aspects of human corporeality provided by Burgos in *Antropología*, pp. 79-84.

2.1. Neuroscience: *The Greek Ballast*

Neuroethics attempts to address the ethical issues that arise in neuroscience, and these issues are extensive, from our fundamental conceptions of persons through the creation and employment of new technologies such as brain computer interfaces, functional neuroimaging, and neuropsychiatric medications used for purposes other than the treatment of specific illness, for example, in the hope of cognitive enhancement.

The Greek Ballast keeps neuroscience and the neuroethics that draws upon that field, locked into a conceptual framework of persons as biological animals only. There are historical explanations for this occurrence, whose effects are still operative today. If we consider animal models person as they emerged historically, we can see both their development and staying power. Aristotle was a biologist and employed concepts of genus and species in categorizing all living things. Humans were part of the animal kingdom, specific by their capacity for rationality. Another way to say this is that we are animals of a specific kind, a specific identifiable species, differentiated from all other animals only by our rational capacity.

This was the beginning of what can be described as a bottom-up model for understanding persons. It endured into the modern era, despite the explicit rejection of Aristotelian metaphysics during the transition from the Middle Ages to the early modern era and the development of the modern sciences that sought authority in method rather than in the ancient texts. While Aristotle and Aquinas were rejected, ideas have a stubborn resistance to being summarily shelved.

This was evident in modern science. The first disciplines in modern science to develop were astronomy and physics, deeply interrelated by their mathematical language and their common presuppositions. physics, chemistry and, in the 19th century, by biology, including the work of Darwin that developed subsequently. So, the first developments in modern science dealt with the material world that was conceived as subject to the deterministic laws of cause and effect, amply attested in Newton's laws of motion. Chemistry moved from a similar theoretical perspective. The biology of living things, however, required more complex theoretical underpinnings to account for life, and biological beings came to be understood as adapting to their environment in a paradigm of stimulus and response, still deterministic in nature. Science as a discipline, working from the empirical method, has tended to conceive of persons in a model that runs from the bottom up, that is, from the level of the phy-

sical and corporeal to the psychological, with psychology understood as an empirical discipline that employs the same methodology and the same presuppositions of determinism held in biology¹⁷.

2.2. Consequences of the Greek Ballast

The biological model of persons, as physical organisms, continues to inform the discipline of neuroscience today as it focuses more explicitly on a single human organ, the brain. While the way the brain itself has been conceptualized in neuroscience has changed, for example from earlier computer models of information input and output to more recent models of the brain as connectome, the underlying presupposition of animal models has remained active. Neuroscience studies a particular organ of human animals, the brain.

If persons are understood only from these physical and biological categories, and in deterministic ways, then the categories themselves obscure that which is most unique to being persons. Considering the Burgos model, for example, the hard sciences have no tools or methods to identify or recognize the spiritual level of persons, where some of our most unique aspects reside. In short, this bottom-up model does not work when it comes to persons. A radical rethinking, as Burgos suggested, is imperative.

This rethinking of persons depends understanding persons has two aspects. First it moves from direct examination and analysis of persons in categories specific to persons to create an understanding of person capable of capturing what is unique to persons and not present in the animal kingdom, and the second, deploying the model to help us understand both the limits of contemporary conceptual neuroscience. Several conclusions emerge from this examination.

First, animal models cannot fully capture who we are. There is much about personhood that cannot be recognized from the bottom-up approach of neuroscience, as the consideration of human corporeality above demonstrated.

Second, it becomes possible to examine those features that are unique to persons, both at higher level human capacities, but also the ways in which other aspects, like the body, have personal dimensions not present in the animal kingdom or in animal models of person. Another as-

¹⁷ This historical development, as it impacted both science and philosophy, is traced in J. MACMURRAY, *Interpreting the Universe*, Humanity Books, Amherst, NY 1996.

pect of persons not mirrored in the animal kingdom is the complexity of human *language*, to be distinguished from animal forms of *communication*. There is no animal word of literature, no poetry or novels, no animal literary canon to be argued over, and no oral traditions that transmit important understandings of identity and community from generation to generation. One of the most sophisticated aspects of human language is our ability to use metaphor, to speak abstractly and imaginatively in ways that convey relationships difficult to comprehend in concrete, literal language. This is immediately seen in proverbs, for example, such as “People who live in glass houses shouldn’t throw stones”, “A picture is worth a thousand words”, “Every cloud has a silver lining”. Such sayings convey something about human, personal experience in a brief, pithy, easy to remember fashion¹⁸.

It is in the world of metaphor that the philosophical anthropology of integral personalism can serve as a hermeneutic for understanding the limitations of animal models of persons, including the role of language in our understanding. Following the example of language, we can see that when we speak of “animal minds” and “animal language” we are speaking metaphorically, that is, we observe aspects of animal function that *appear similar in some ways to our own*, and so we apply human terms to them. The problem arises when we fail to recognize that we are speaking metaphorically, that the word “mind” does not carry the same meaning in reference to animals as it does to persons. Why does this occur? From the perspective of neuroscience, animals and persons are alike in that the both have brains –interconnected networks of neurons, that are seen as giving rise to behavior–. The physical likeness is carried over in a literal sense, so that the polysemy of the word “mind” falls away and the two brains and their function are, literally, equated. This is how the conceptual blinders of biology and neuroscience are created. No one has had direct experience of animal “mind”, yet we assume equivalence in concepts reduced to the physical functioning of body organs. What is left out in such a maneuver is what is specifically and uniquely personal, what is univocal to persons. Failed metaphors that equate animal body and human body help us to see similarities, but they simultaneously obscure our ability to see the real differences between animals and persons.

¹⁸ On metaphor, see P. RICOEUR, *The rule of metaphor*, trans. K. McLaughlin and J. Costello, Routledge, London 1977; J. BEAUREGARD, *Philosophical Neuroethics: A personalist approach*, vol. 1 *foundations*, Vernon Press, Wilmington, DE 2019, pp. 19ff.

Third, as the Greek Ballast continues to operate in neuroscience, it continues to obscure the spiritual level of persons. Science has the categories of matter and organism and attempts to explain what we are through these two categories. Integral personalist anthropology, however, through a direct examination of human experience, opens the way to seeing the spiritual level of persons, the domain of capacities that do not exist in other beings in the world –our capacities for understanding, loving, for freedom and self-determination, our participation in aesthetic experiences of all kinds, our deep relationships with other persons–. This has profound implications for ethics in general, as well as for neuroethics in particular¹⁹.

2.3. Neuroethics and The Greek Ballast

Thus far, we have considered the presuppositions and practices of neuroscience. Neuroethics, however, is concerned not with the practice of neuroscience research or clinical care directly, but with the ethical issues that arise in these contexts. Viewed from the perspective of persons, the deepest problem of neuroscience in relation to neuroethics emerges, *neuroscience cannot give rise to ethics*. Ethics comes from another place altogether, from philosophy. As long as the Greek Ballast, those unspoken and often unrecognized presuppositions of animal models that undergird neuroscience, continue to be operative, neuroethics cannot come into being, that is, there is no way to do the ethics of neuroscience. Neuroscience formulates and answers biological questions, in this case, questions about the functioning of the human brain in health and illness. It cannot formulate questions about the right or wrong things to do regarding the brain, or regarding persons. It can ask no question about the good²⁰.

Ethics, in contrast, asks questions about the good and evil, about human action, about human freedom and responsibility. These concepts cannot be derived from the physical and organismic presupposi-

¹⁹ This process of obscuring also reduces the personalist concept of human rationality, limiting it to biological processes of sensation and perception only. This simultaneously creates an inherent contradiction about human rationality; it can be understood only from the perspective of person integrally understood, while theoretically (moving from models of biology and organism) denying the existence of the perspective that makes personal understanding possible.

²⁰ On personalist neuroethics, see also J. BEAUREGARD, “The modern ontological personalism of Juan Manuel Burgos in the public square: toward a personalist neuroethics”, see *Quién*, 6 (2017), pp. 7-31.

tions of neuroscience²¹. The bottom-up model of person that we have described does not, and cannot contain such ideas, categories, conceptions. They must come from elsewhere, and integral personalism recognizes the two aspects of this origin. First, ethical questions arise from the spiritual level of persons. Second, ethical questions encompass the whole person, including the spiritual, the psychological and the corporeal. The bottom-up approach of neuroscience cannot formulate or even conceive of ethics given its theoretically deterministic vision. Such a vision emerges from persons fully recognized as spiritual beings, integral, with many aspects, a vision that encompasses the whole of who we are, that sees us not as a “what” –a composite of various cells, organs and processes, but as a “who”, a person–. The bottom-up model contains, as it were, only two levels considering the integral personalist model –the physical and the organic–. It has no way to recognize or understand the higher, spiritual level. The model must be expanded for neuroethics to operate, and it must also be flipped on its head, operating in a top-down fashion that conceives of the whole person as a *person*, not as an animal. It is only from this perspective, and from categories unique and specific to persons, a vision that sets aside animal models as our way of thinking about ourselves, that allows for an ethical vision to arise and flourish, and for the complex issues that arise in neuroscience to be recognized and addressed from an ethical perspective²². This is the way out of the Greek Ballast and into a vision grounded in and sustained by a vision of persons.

3. Categories specific to persons and neuroethics

We can, then, from the integral personalist current of personalism, embrace a philosophical anthropology that does justice to the whole, integral human person, and that recognizes our many aspects as precisely that, as aspects of one person, a person who seeks to live, to flourish, to live in relation with others in community.

3.1. *Persons and neuroethics, or neuroethics adequately conceived*

It may appear that we have wandered far from the first paragraphs of this essay, which provided a brief definition of neuroethics. In point

²¹ On good and evil being specific to persons, see J. M. BURGOS, *An introduction to Personalism*, pp. 220ff.

²² On this top-down approach to considering persons, see J. MACMURRAY, *Persons in relation*, Humanity Books, Amherst, New York 1999.

of fact, these considerations were not digressions, but necessary steps to developing a neuroethics capable of doing justice to the ethical issues that arise in the practice of neuroscience.

What does it mean to posit a neuroethics that is “adequately conceived”? It is a question first of foundation, then of practice. To frame the foundation on which an edifice of neuroethics might stand without falling, one can ask the essential question of identity: “Is neuroethics primarily a neuroscientific discipline or a philosophical discipline?” How one answers this question governs how the field of neuroethics proceeds, or whether it can proceed at all. I have argued elsewhere that neuroethics, which addresses the ethical issues that arise in neuroscience and related fields (e.g. neurology, psychiatry, biomedical engineering, etc.) is primarily a *philosophical* discipline, not an empirical scientific discipline, that is, its foundation arises from ethics rather than science and technology. Neuroscience and neurotechnology are central concerns of the discipline of neuroethics, but the questions asked of these scientific and technological activities are not essentially scientific, they are questions of the individual and the common good, of intention and effect in new technologies, of good and evil, of personhood, of living and of living well. These questions are philosophical and ethical questions, not biological, organic or mechanical ones. Neuroscience, in the realm of medicine for example, can, and already has, created medications that can address a variety of clinical conditions such as Attention Deficit Disorder and Alzheimer’s disease. Neurostimulant medications can be enormously helpful to individuals with ADD in that they help the person to sustain their focus and attention by upregulating attention systems in the front part of the brain’s attention network. The acetylcholinesterase inhibitors help preserve memory functioning by blocking the enzyme that breaks down the acetylcholine molecules in the temporal lobes of the brain which are essential for formation of new memories. Few, if any, would argue that these compounds should not be put to such uses given their obvious benefits. Other questions also arise, and these are more contested. Should these two classes of medications be taken by healthy individuals to enhance some aspect of cognitive functioning and what would this mean for the individual and for society? Neuroscience can neither formulate nor attempt to answer these questions, they are ethical/philosophical questions that call for a different type of evidence and a different type of reasoning than neuroscience can provide. It requires, for example, the ability to consider the virtue of justice, who would have access to such medications? Who would make such decisions? Neuroscience cannot generate the con-

cepts of “fairness” or “cheating”. Ethics can ask the question, “If a college student took a cognitive enhancing agent during finals week, would they be cheating on their exams?”²³ Would it give them an unfair advantage over their peers that could have potentially long lasting effects in areas such as job, career and income over time? The questions continue to multiply: Should these compounds be called “medications” in this context, since they would not be used under such circumstances for the treatment of a medical condition, but rather in an attempt to enhance the functioning of health individuals? What might such action do to our fundamental notions of health and illness? Are there situations in which individuals could be *required* to enhance and what implications would arise from the possible answers to this question to, for example, educational institutions, business and the military, and fundamental human freedoms and civil rights? The empirical scientific method, and thus the method of neuroscience, cannot yield an ethical vision, its presuppositions are physicalist and determinist, grounded in phenomenalism and the capacity for measurement of biological reality. Ethics, however, can formulate the questions and respond.

3.2. *Personalist neuroethics*

Neuroethics, then, is an ethical discipline that addresses questions that arise in the practice of neuroscience, both research and clinical. But which ethics are we talking about? And what does it mean for ethics in general, and neuroethics in particular, to be personalist in structure? Western philosophy has given us several different ethical systems across its 2,500 years history, first virtue ethics, then deontological ethics and then utilitarian ethics, three different visions of the good and how it ought to be sought²⁴. Philosophy has also considered, particularly in the context of postmodernism and the relativistic character of local narratives, that there can really be no such thing as ethics in the sense of an ethical vision applying equally to everyone, everywhere across time and place.

²³ Note that in this context I am not raising the question of whether or not cognitive enhancement actually does enhance some aspect of human functioning in a measurable way (this is addressed in the neuroscience and neuroethics literature and the results have been mixed), and that would involve asking such questions as, “Does an ADD medication improve attention and learning in health individuals so that they actually attain better grades than their non-enhanced peers?” “What dosages over what time frame would be required to achieve such results?” My purpose here is to raise the ethical questions of enhancement and justice.

²⁴ For an overview of these traditions in light of neuroethical thought, see J. BEAUREGARD, *Philosophical Neuroethics*, cit.

What kind of ethics, then, is neuroethics, and what might it mean for neuroethics to be “personalist” in character, and specifically integral personalist neuroethics? In light of the consideration in this article, this definition of personalist neuroethics is offered: “Integral Personalist Neuroethics is a philosophical discipline founded in the integral personalist vision of persons adequately conceived as a unity revealing many different aspects, which addresses the numerous ethical questions that arise in both research and clinical neuroscience”²⁵.

To unpack this definition a bit, personalist neuroethics has both a theoretical and a practical aspect. The theoretical aspect begins with integral personalism’s anthropology and methodology in the examinations of persons in the model of person described above. The practical aspect of Neuroethics seeks to bring the notion of persons as a framework for addressing ethics in neuroscience. I have organized the practical aspects of neuroethics in two broad categories, “individual neuroethics” and “social neuroethics”:

Individual neuroethics

1. Neuroethics and the beginning of persons (understandings of personhood, neurological criteria for personhood, neurodevelopmental disorders).
2. Neuroethics and injured persons (ethical issues around brain injury, medical interventions in neuropsychiatric conditions such as Deep Brain Stimulation and Transcranial Magnetic Stimulation).
3. Neuroethics and the end of persons (dementia care at the end of life, neurologic criteria of brain death).
4. Neuroethics and enhanced persons (attention, memory and moral enhancement).

²⁵ An earlier version of this definition appeared in my book, *Philosophical Neuroethics*, cit., pp. 196ff. It is also important to mention several recent works on neuroethics in Spanish: J. A. LOMBO and J. M. GIMÉNEZ, *La unidad de la persona: Aproximación interdisciplinar desde la filosofía y la neurociencia*, Eunsa, Pamplona 2013; É. BONETE, *Neuroética práctica*, Desclée de Brouwer, 2010; J. M. GIMÉNEZ and S. SÁNCHEZ-MIGALLÓN, *De la neurociencia a la neuroética: Narrativa científica y reflexión filosófica*, Eunsa, Pamplona 2010.

Social neuroethics

1. Neuroethics and government (public policy decisions touching on neuroscience, e.g. funding, the use of neuroscience in government agencies).
2. Neuroethics, justice and forensics (neuroimaging as evidence in legal proceedings, addiction neuroscience and responsibility).
3. Neuroethics, national security and warfare (neuroscience and the military, neuroweapons).
4. Neuroethics and the media (public perceptions of neuroscience, responsible reporting of issues in neuroscience).
5. Neuroethics and the academy (neuroscience research ethics).
6. Neuroethics and religion (Neuroscience views of religious tradition, theological neuroethics)²⁶.

As these content areas demonstrate, the reach of neuroscience is long, and therefore the reach of neuroethics must be equally long, robust and capable of identifying and addressing ethical concerns that arise in neuroscience research and practice. A neuroethics conceived from the perspective of integral personalism so conceived would begin with persons adequately conceived, understood and examined from the beginning in categories specific to persons, and would sustain this focus through all neuroethical considerations, rather than focusing primarily, or exclusively, on questions of technology. Technological questions would be raised in terms of their impact on persons and society, and a philosophy of technology for such a task would also be based in persons, not in the technologies themselves²⁷. The goal of a neuroethics operating in this fashion would be the good of the human person and the common good of society touching on topics from the identity of persons through the uses of technology related to the functioning of the human brain, and thus, if persons are an integral whole, the whole human person.

Conclusion

In this essay we have examined the philosophical current of integral personalism as a resource that can inform the specific discipline of neuroethics. The notion of categories specific to persons was identified as a

²⁶ J. BEAUREGARD, *Philosophical Neuroethics*, cit., pp. 195-199.

²⁷ See J. BEAUREGARD, "Personalism, Neuroethics and Technology", in J. BEAUREGARD, *Philosophical Neuroethics*, cit., pp. 181-193.

key contribution of integral personalism and deployed as an instrument for understanding the limitations of contemporary neuroscience as well as a way to develop a neuroethics capable of addressing the many ethical issues that arise in neuroscience, both theoretically. And the essay concluded with a succinct definition of integral personalist neuroethics in light of these considerations and a model how a neuroethics so structured might look.