Personalist and Impersonalist Principles in Neuroethics: Metaphysical Distinctions in Value Contingency and the Evolution of Normative Structure

Principios personalistas e impersonalistas en neuroética: las distinciones metafísicas en valor de contingencia y la evolución de la estructura normativa

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Abstract: Value theory has traditionally sited value to person or person affecting concerns. Efforts to broaden contingency loci beyond the person, however, or even to be wholly independent of such concerns, increasingly challenge this notion, an ethical architecture termed impersonalist and now increasingly used in neuroethical contexts. In neuroethics contingency shifts typically adopt one of three formats: 1) intergene-rational transactions where larger social entities constitute the value site, 2) extended mind theory, in which the person centered locus embraces non-person functional elements, or 3) posthumanism where value is attached to malleable, posthuman entities. Impersonalist contingencies are characterized metaphysically by mixed modes in which indeterminate relations supervene on person and non-person entities, or constitute the contingency locus alone. Value contingencies in personalist architectures, by contrast, are attached to metaphysical entities that are qualified by categorical accidents. Impersonalist formats thus site value to larger, less individuated systems characterized by their malleability; therefore, they can be expected to diminish anthropocentrism, enhance non-person value parity, and promote the deconstruction of value. Personalist formats, by contrast, site value to individuated, person or person affecting entities. Such formats can be expected to emphasize the integration of the individual and metaphysically distinct form, and to preserve intrinsic value.

Keywords: normative, contingency, neuroethics, metaphysic, impersonalistic.

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Resumen: La teoría del valor ha localizado tradicionalmente el valor en los asuntos que afectan a la persona o las personas. Sin embargo, los esfuerzos para ampliar la contingencia loci más allá de la persona, o lograr incluso que sea totalmente independiente, desafía cada vez más esta noción. Se trata de una arquitectura ética llamada impersonalista y que se utiliza cada vez más en contextos neuroéticos. En neuroética, los desplazamientos de contingencia normalmente adoptan uno de estos tres formatos: 1) las transacciones entre generaciones donde las entidades sociales más grandes constituyen el sitio de valor, 2) la teoría extendida de la mente, en la que el locus centrado en la persona abarca elementos funcionales no personales, o 3) el posthumanismo, donde el valor se fija en entidades maleables y posthumanas. Las contingencias impersonales se caracterizan metafínicamente mediante modos mixtos en los que relaciones indeterminadas sobrevienen sobre la persona o entidades no-personales, o constituyen aisladamente el locus de contingencia. Por el contrario, las contingencias de valor en las arquitecturas personalistas están asociadas a entidades metafísicas que son cualificadas por accidentes categoriales. Los formatos impersonales, por tanto, sitúan el valor en los sistemas más grandes y menos individualizados caracterizados por su maleabilidad; por lo tanto, se puede esperar que disminuya el antropocentrismo, aumente el valor de lo no-personal, y promueva la deconstrucción de valor. Los formatos personalistas, por el contrario, sitúan el valor en personas individuales, o en asuntos que afectan a la persona. Se puede esperar que tales formatos enfaticen la integración de lo individual y metafínicamente distinto, y preserven el valor intrínseco.

Palabras clave: normativa, contingencia, neuroética, metafísica, impersonalista.

1. Introduction

Attempts to map value onto a field of subjects presuppose contingency as the precondition to formulating ethical norm. Traditionally, contingency has been sited to person affecting concerns, an ethical architecture termed personalist that has been the source of anthropocentric axiologies, and where value is explored in the context of its person related properties. The perspective of value as person centered, however, is no longer the sole terrain for charting value-related loci. Increasingly, a wide ranging set of philosophical issues related to the nature of the human person, his relationship to the exterior world, and/or the prospect
of modifying one or the other, or both, challenge this premise. These current conceptions cut across a spectrum of newly developing disciplines spanning ethics of ecology\(^1\), political theory, interpretive forms of neuroethics\(^2\), and genesis problems\(^3\), the last conceived particularly in reference to cognitive enhancement.

Such tendencies marginalize human participation and shift value to non person loci, facilitating, therefore, the deconstruction of centralized value sources\(^4,5\). Key in these attempts is the intent to deploy a broader and more connected reality where value is embedded in a set of network relations and where a binary world built on a subject/object divide is no longer relevant. Seen from this new perspective is a more egalitarian and inclusive emphasis that eschews a hierarchy of dominant humans in favor of one in which a universal membership will share the benefits of a broadly distributed emancipation\(^6\); a kingdom thus composed of more than merely human and individual ends\(^7\). This severance of value from its person centered base, and its replacement with value notions that lack focal and localized contingency, has been designated the ‘impersonalist ethic’.

As a force in ethical theory impersonalist architectures have seen much traction in neuroethical approaches where value contingency has direct bearing on person relating ontologies. It has been invoked, for example, in the elaboration of subsidiary normative principles such as Procreative Beneficence\(^8,9\) that relativize person centered with respect to utilitarian socialist norms. In cases of neuroenhancement the principle is applied in the context of intergenerational scenarios where it becomes incumbent on couples to select the child with ‘the best chance of the best life’. The maximizing of such features as improved intelligence and morality, for example, is emphasized so as to enhance the overall value, i.e.,

\[\text{\textsuperscript{1} B. Latour, \textit{We Have Never Been Modern}, Harvard U Press, Cambridge, MA, 1993, p. 21.}\]
\[\text{\textsuperscript{8} B. Latour, \textit{We Have Never Been Modern}, Harvard U Press, Cambridge, MA 1993, p. 21.}\]
the level of trait presence, within the social entity; hence value becomes a property of the larger social group and contingency is no longer uniquely personalized. The establishment of a provisional role and the denial of an evaluative and adjudicative one to parent/child donors, moreover, thus also raises the issue of the normative subordination of the provider's constitutive ontological features, his agency and determinative faculties.\(^\text{10}\)

Impersonalist architectures are also applied in neuroethical reinterpretations of the human person, that widen the person object beyond its corporeal perimeters including, for example, extended mind theory, or that propose use of new interfacial technologies in mind merging or mind machine permutations, among others. Extended mind theory, in particular, seeks to draw semantic inferences about mental participation in external processes that are operationally analogous to cognition and which thus promote ethical parity with outsourced cognition. In each of these cases the notion of the person is greatly expanded to suit novel functional demands. Since the concept of performance is subject to wide variation according to whichever goal based objectives are pursued, the person-centered locus is itself made variable when set within a functional context, as is the contingent value.

Finally, such principles underwrite contemporary efforts to redesign human cognition, termed posthumanism, that generate new ontologies fundamentally and radically differing from that of the human person\(^\text{11,12,13}\), thus voiding the notion of a uniformly distinguished, person ontology.

Normative objectives expressed in these proposals are heterogeneous, reflecting either an exalted form of enlightenment that emphasizes freedom and a self determination that is directed to personal re-creation, or notions of becoming in which changes to mind and body are constrained to accommodate a more inclusive unity with the natural world. These proposals typically assert a right to the unlimited openness seen as needed for reconfiguring the human person and thus accessing the heralded prospects of a new, and embedded, post-humanity.

Broadened conceptions of value attachment raise the issue of what is metaphysically claimed in siting value to extended networks of variable relations and whether the nature of value is consistent with such claims. This paper thus critically explores the metaphysical implications of neuroethical frameworks that presuppose an impersonalistic norm on the ground that value contingency is incompatible with destabilized and heterogeneously mixed ontologies. Such ontologies reflect a notion of the world that is fluid and preconditioned by an informational reserve dictating the emergence and relationships of form. Personalist architectures, by contrast, site value to individuated entities where information is derivatively conditioned by the properties of things. This paper will thus also argue that the particular understanding of value contingency, i.e., the metaphysical features of the valued object, bear implications for the development of normative principle and that in the case of impersonalist architectures these serve to deconstruct not only the notion of anthropocentric perspectives but also the very possibility of value siting as a distinguishable referent.

2. Impersonalistic Ethical Architectures in Neuroethics

Impersonalist influence on neuroethical norms centers in three categories of ethical issues: 1) genesis problems relating to transgenerational neuromodulation proposals, 2) functionalist notions of extended ethical parity, and 3) claims that malleability constitutes a primary human ontology. The values, their attribution, and the form that contingency may adopt are discussed in each case below.

2.1 Procreative Beneficence and Genetics

Issues arising from genesis problem types concern themselves with values of state; examples include future welfare, ideals of a better humanity, and the like. In cases of neuroethics, enhanced moral capacities or elevated intelligence, for example, have been proposed as consonant with a global objective of societal improvement. The value claim in these problem types is thus directed to the status or state of the affected

group as a whole; hence value attachment is understood to reside in the collective and not in the individual.

In genesis problems value bestowal requires, by definition, that the transaction be conducted across generations, parties to the transaction being comprised from value donors, who are usually parents, and value beneficiaries, the collective that is formed by members drawn from the next generation. The valued trait constitutes the center of the exchange, since it is the purpose for which the transaction was initiated. It is not, however, the sole value in question. Since the trait is conferred, its conferral requires that the donor exercise an ontological feature, his capacity for the evaluation of value\textsuperscript{18,19} –the trait must be recognized as valued– and his agency, in order to mediate its transfer, and similarly for the value beneficiary.

For each party in the transaction two value structures are thus established, an ontological one and the featured trait. Value contingency for the case of the donor assumes its traditional understanding; which is to say the value residing in the neuroenhanced trait is both person affecting and intrinsic.

To clarify how value contingency is attributed in the case of the collective it is helpful to review the manner of generating the value structure. Strategies to achieve a population of humans better endowed in a particular neuroenhanced trait are conditioned by the need to enhance single individuals –only single brains can be modified per event– a priori, who may then ‘confer’ the value on the population. This is akin to saying that the features of only single individuals are those that subsequently become the property of the collective. The neuroenhanced individual, thus, constitutes a vehicle by which value is transferred to the collective.

By this understanding, value contingency in beneficiaries is neither person affecting nor intrinsic, since the beneficiary is constituted by a cluster of individuals for which entitlement is claimed. In this distributed sense value is made a property of the whole collective, its mode of attachment thus fundamentally differing with respect to that of the value donor. Since the trait is not subject to a physical relocation contingency is extended on the basis of the ‘collective’ intent to incorporate the


\textsuperscript{19} D. Larrivee and A. Larrivee, “Value contingency and substance supervenience: metaphysics of processional relations and impersonalistic neuroethics”, cit.
enhanced individual as its member. Contingency is thus determined by social convention, which is, therefore, instrumental to its mediation\(^\text{20}\).

This type of contingency, accordingly, is termed *instrumental contingency* in linguistic analogy with instrumental value, since it is the collective intention to attribute the value of the trait to itself. Understood as attachment to the collective, thus, contingency is sited to all members and to the relations that establish their common membership. Significantly, since the capacity for cooperation is grounded on a common stock of knowledge that is both updated and exchanged, such relations are mediated informationally.

### 2.2 Value Contingency in Extended Mind Theory

Procreative beneficence is not the sole norm invoked in neuroethics that is influenced by impersonalist principles. Due to the impact of contemporary advances in the neurosciences older conceptions of ourselves as subjective and conscious entities have been the subject of theoretical revision; new understandings, in turn, have brought in their train new neuroethical forms. Among the most frequently cited novel conception provoking new norms is one related to the nature of the mind, the extended mind theory. In its traditional understanding the mind has been intimately linked to the brain, or at least to the brain’s embodied status in the individual. The precise nature of this linkage has remained unclear; however, which has given rise to the colloquial term, the ‘hard-problem’, i.e., the manner by which the mind emerges from the brain. Des Cartes, formerly and famously, for example, had argued that mind and brain are composed of two differing substances; therefore their properties also differed. Although most philosophers now regard the mind and brain to be of one substance their relationship yet remains problematic, creating philosophical dilemmas with regard to how best to conceive the mind.

The significance of these dilemmas is amplified, moreover, by the fact that the mind is used to purposeful ends, i.e., it engages in tasks and objects that exist in the external world. Extended mind theory proposes the unique alternative that the mind includes not only the brain but also those external materials that assist its functioning, the conception employed thus being a functionalist one\(^\text{21}\). In this proposal the mind is no longer viewed as limited by its corporal perimeters but is seen to be

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extended beyond the body due to the generation of the functional relations that it establishes with such external elements. Clark and Chalmers\textsuperscript{22}, who coined the phrase, cite the example of Otto, a memory challenged individual who uses instructions penned into his notebook to guide his steps to New York’s Modern Art Museum. How Chalmers and Clark conceive of the relations established between Otto’s brain and the notebook is not stated; since the causal chain is claimed to reside within the mind, however, one can presume that they intend these to be information-driven. In the Clark-Chalmers example Otto’s notebook thus serves as a functional extension of his recollection and so constitutes a portion of his mind, one that lies outside his cranium. On the basis of this functionalist conception they deduce an ethical parity principle: this is to say that since mental activities outside the head function to the same end as those inside they are equivalent in purpose and value. The ethical parity principle thus lays open the prospect of modulating brain function directly, and in a radical way, since virtually any type of modification outside the head may now be permissibly duplicated inside. Indeed, ethical judgments in this understanding are based on the effects that they achieve, suitably adjusted for cost benefits analysis, and not with respect to the issue of which ontological substance they are done on\textsuperscript{23}.

By extension, moreover, in making the exterior operations functionally equivalent with those occurring within the individual, value attached to the mind –hence its ontological properties– is sited to a virtually unlimited series of loci, since the sorts of objects with which the mind may interact are unrestricted. Consider the extraordinary levels of information flowing regularly through the senses, for example, that is the result of the mind’s embedded nature, a fact noted even by philosophers preceding the modern scientific era; Aquinas, for one, characterizing such relations as unending\textsuperscript{24}. In the extended mind theory, therefore, value is no longer exclusively localized to the individual but delocalized, rather, to whatever set of objects are or become the focus of the mind’s deliberations. The value originally accorded solely to the person is thus greatly broadened, to be invested in a multitude of ancillary sites; as a corollary, value within the individual is itself diminished.

The loss of focus incurred through use of the ethical parity principle is analogous to contingency shifts seen with the Procreative Benefi-

\textsuperscript{23} D. Levy, \textit{Neuroethics and the extended mind}, cit.
cence norm; indeed the ethical parity principle offers another instance of an impersonalist approach to value attribution, where value is invested in the relations and entity partners to which the mind is transiently linked. What appears to distinguish the ethical parity principle from procreative beneficence is its conflation of the individual with new entities, which then become identified with the individual. In the case of procreative beneficence, by contrast, the individual is identified with the larger social entity and his value thus assumed by the larger group.

2.3 Impersonalistic value contingency in post humanism

In a related development, technology advances, because they afford the possibility for modulating cognition, are themselves seen to be the stimulus for invoking impersonalist principles. A spectrum of technologies, in fact, from materials, information, nanotechnology, biotechnology, and neurotechnology, have coalesced to now yield an array of technologies that can co-opt, amplify, redirect, add, or otherwise modify physiologically normal brain operation. Coupled with gene tools that are capable of introducing precise changes at the level of single genes, these new technologies are poised to broadly and systematically alter nearly any neural circuit likely to underlie human behavior. Such possibilities have stimulated new conceptions of the human being –indeed, the post human being– and of new normative principles that guide his modification\(^{25, 26}\). Like procreative beneficence and the ethical parity principle, these novel norms bear close relationship with those philosophically derived from impersonalist principles.

In their preliminary revelation, they embrace a specifically enlightenment agenda, with its advocacy of emancipation and empowerment. Their means of access, however, is gained only through the material and malleable propensities made available through the novel technologies, and whose modification is premised on the assumption of an immutable and unaffected Cartesian ego. Posthumanist proposals thus begin with structural changes that enhance capabilities already present in the human being, but then proceed to those intended to thoroughly revise his

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\(^{25}\) G. Rae, *Heidegger’s influence on posthumanism*, cit.

ontological status. Indeed, prospective movements toward such a post human state can be seen in two types of proposals, those modifying what are intrinsically bodily boundaries, ionically illustrated in Donna Haraway’s Cyborg Manifesto, and those modifying the emotions.

In its capacity to transform the body’s structure, however, the substrate for which enlightenment norms are pursued is rendered, no longer, receptive. The premise of an immutable Cartesian I guiding a wholesale corporeal revision is not a reality empirically substantiated in any scientific understanding. Body imagery, and its physiological derivation from body schema, in fact, is the normal means by which the self is invested with content, and the means by which it conceives its relation to the world. When bodily form is altered the notion of emancipation is itself altered as is the self for which it is pursued, a self for which an ontological persistence can no longer be presumed.

Value siting in posthumanism, thus, differs from the sorts of attachments seen through use of procreative beneficence and ethical parity principles, where siting is directed to associations that combine metaphysically distinct human entities with other entities and to their bridging relations. The generation of new ontologies, rather, means that siting is directed to processional relations alone, i.e., to entities having no fixed forms. Since the human being is himself made malleable, thus processional, his form can no longer be distinguished by qualitative properties on which relations may supervene. His very substance is the fluidity of transient relations whose only qualitative distinction is their existence, and where the individual’s essence lacks any ontological presence; hence, its disappearance as a determinative force for the establishment of anthropocentric relations. Its normative foundation, therefore, is de facto impersonalistic.

3. Metaphysics of Relations and Value Contingency in Impersonalist Ethics

Although posthumanism is perhaps the most easily seen instance in neuroethics where impersonalist principles underwrite value contingency, it is generally applicable to all three cases, value in each case being

sited to highly indeterminate associations. For the present purposes Ma-
río Bunge’s\(^\text{32}\) explication of determinate and its conversal, indeterminate,
serves here to clarify the effectively causal dimension within which such
relations/associations should be understood.

‘...causation is a category of connection and determination corresponding to an actual trait of the factual world, internal and external, so that it has an ontological status...determination is a constant and unique connection among things...hence predictable and reproducible...indeterminate states constitute an open set, that is, one admitting of new elements...’\(^\text{33}\).

Determinacy, according to Bunge, and so indeterminacy, has a real relationship to the world of things; the constant and unique connection between entities that he refers to thus being a consequence of their real world properties. This means that relations between entities are not structured arbitrarily, but depend upon qualitative features inhering in things that thus determine the relata between them\(^\text{34}\). It also means that some entities are not, nor cannot, be related due to the properties they possess, these being non-relational. In consequence, value is not an arbitrarily assignable property, but has a definite connection to real entities. By extension, impersonalist claims are made in a factual world, to use Bunge’s term; hence, such claims are salient for and subject to metaphysical consideration.

The issue then at stake is what may constitute a ‘real world’ substrate for value, and whether the impersonalist claim is metaphysically consistent with this conception. It is patent, as a working presupposition, that value contingent objects possess unique qualities, since an object, or even a process whose instantiated properties are variable cannot be valued at one time in one way, and at another, when said instantiated properties have changed, still be valued for the same properties (said qualitative properties being here understood as only those that a thing has, irrespective of whether there are other contingent things, the latter thus being extrinsic). Such distinguishing characteristics, in fact, govern separability, which is to say that two entities are separably distinct in virtue of their possession of their own unique physical states\(^\text{35}\). The acquisi-

\(^{33}\) Ibid.
\(^{34}\) T. Ward, Relations without forms: Some consequences of Aquinas's metaphysics of relations, in “Vivarium”, 48 (2010), pp. 279-301.
\(^{35}\) M. Esfeld, Quantum entanglement and a metaphysics of relations, in “Studies Hist Phil Modern Phys”, 35 (2004), pp. 601-617.
tion of a set of new properties by an object thus means that it is separable, temporally if sequentially acquired, from its former state; hence, any formerly attributed value is no longer applicable. Normative principles invoked for post-humanist entities thus lose their force in application.

Cases of procreative beneficence and the ethical parity principle, on the other hand, are distinguished from posthumanism, since value contingency is claimed in these instances to supervene on mixed metaphysical modes, that is, those comprised of the entity individual and his extended relations with other entities. The question here raised is whether such complex associations constitute uniquely characterized objects; they thus invite consideration as to whether they form larger and more complex entities, i.e., holisms with their own suite of categorical qualifications.

Since the complex entities in question are structured by their shared relations, the significant question then becomes that of the sorts of relations established between the individual and his associated partners. Holisms, conceptually and by definition, are structured from determinate relations; that is, the relations between the entities of which it is made express a rigid interdependence, there being no non-relational properties. Bunge, like Aquinas, furthermore, attributes a causal and dispositional orientation to said relations. This means that entities expressing determinate relations are functionally cohesive, they being operationally and integrally configured. Indeterminate relations, by contrast, yield units that lack cohesion and are operationally inchoate. They are, moreover, not open to non-relational properties. We can presume, therefore, that should neither condition satisfy –the absence of determinate relations, i.e., the presence of indeterminate ones, or the presence of non-relational properties– no single entity can be structured for which value contingency has a metaphysical grounding. In a prominent philosophical proposal for the characterization of quantum entanglement, for example, Teller concludes that the existence of non-relational properties is sufficient to designate two entities that otherwise share relational properties to be distinct individuals, a point this paper concurs with.

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37 M. ESFELD, Quantum entanglement, cit.
‘It is sufficient for an object to be a distinct individual that it have a non-relational property. And it is quite consistent to suppose that two such distinct individuals, each having a non-relational property, should also stand in some inherent relation to each other’\textsuperscript{40}.

Significantly, relations in such cases are informationally structured, which also means that determinacy is inversely related to information content; hence, also the degree of variability. When information content is low, messages are highly specific and there is little variability in the manner in which they can be interpreted. They are, therefore, highly constrained and so determinate, the specification of the relation between entities thus being limited to few outcomes. For high information content, on the other hand, there exist multiple ways in which relations between entities can be expressed; accordingly, they are indeterminate.

In fact, assessments of information content using Shannon’s\textsuperscript{41} relation,

\[ I(x) = -\log p(x) \]

(where information content is related inversely to the negative log of the probability of a specific message), are invariably high for either application of impersonalist norm; hence, single entities are not created. Collective relations are shared, for example, not only between members but also outside the existing membership, and are characterized by non-informational as well as informational relations\textsuperscript{42}. Indeed, relations between collective members are subject to wide variation with minimal constraints either in the entities between which the relations are sited or in the interpretive operations that govern information exchange. Extended mind theory poses an analogous situation since relations between the individual and other entities are subject to continual change. Indeed, neither in cases of procreative beneficence nor in those of the ethical parity principle are metaphysically stable objects generated for which value can be contingent.

\textsuperscript{40} Ibíd.
High information content, in fact, is a revealing diagnostic in so far as the state of the properties that are being related. It reveals, significantly, that the properties of the entities in association are in an ongoing state of transition. It is precisely, in fact, a reflection of this state of continual change that said relations are indeterminate. Like posthumanism, no single greater entity is therefore constructed that in a ‘real world’ can act as a value substrate. This is akin to saying that the collective cannot acquire the intrinsic value residing in the neuroenhanced individual; nor can the ontological properties, thus value, of one’s mind be extended to ancillary, and numerous, objects. Their transient associations may themselves be valued, but the ontological and intrinsic value contingent to the individual remains nontransferable.

These considerations thus lead to the subsequent and more general conclusions: Although relations can supervene on entities that they relate, if, however, each of the related things instantiates a determinate relational property, supervenience on entity/indeterminate relations is non-existent. Value contingency understood as supervenience is thus disjunctive with respect to such relations; hence, its attribution in procreative beneficence and ethical parity norms constitutes siting to improper mixtures. By extension the siting of value in information based relations that allege the establishment of a causal linkage but which otherwise express high information content, hence are multiply configured, cannot yield suitable contingency sites. Such relations by definition lack a specific set of properties for which value can be designated.

### 3.1 Malleability as a Metaphysical Feature

These conclusions are not merely epiphenomenal, or even felicitous, but emerge from foundational presuppositions in impersonalist metaphysical emphases. By dismissing distinctions between entities, and by forging a relational unity with an exterior world, they void by default the existence of individual and uniquely qualifying form. As a consequence, also lost is the ontological clarity of a uniquely qualified human substance that is set within a network of relations with external entities. Impersonalist approaches thus underscore a primary understanding of the world that is compositional, i.e., made of matter, material existence thus constituting its predication. Property supervenience, by contrast, is

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44. D. Larrivee and A. Larrivee, "Value contingency and substance supervenience: metaphysics of processional relations and impersonalistic neuroethics", cit.
denied as having explanatory power; which is to say that in the absence of qualifying properties material existence is non-separable as well as temporally and spatially transitional.

A primary explanatory feature of this metaphysics thus consists in the lack of individuation between entities. Indeed, it is in this non-individuated sense that impersonalism distinguishes itself with respect to a metaphysics of things. In the case of the latter the world consists of individuated things, an understanding predating Aristotle\(^\text{45}\) and re-emphasized by Aquinas who makes this point in his characterization of entity distinctions.

‘And so it is that everything guards its unity as it guards its very existence (esse)’ and each and everything is one through its substance\(^\text{46}\) where substance is here understood to be in possession of a unique set of qualitative properties, which are basic, i.e., not reducible, and intrinsic, among these being that of a unique spatiotemporal location. Properties of things, in the latter view, are not merely the result of their possession of a material composition, which is needed, but insufficient to determine them. Properties, here instead, are expressed through the organizational arrangement of composing materials, a metaphysics of which offers an explanatory account of the physical world\(^\text{47}\).

In the non-individuated and fluid impersonalist view, on the other hand, the primary ontological feature constituting the natural world is its malleability. Human cognition, in consequence, is conceived as intrinsically plastic, its most frequent allusion an evolutionary paradigm, where a past progression of altered forms underwrites an indefinite future of change. Such a view is reinforced, moreover, by what is seen as the brain’s receptivity to neuroplastic patterning, generated from any multitude of stimuli. Its dynamic and malleable nature is thus seen not only as a historical endowment but as an operable dimension intrinsic to its defining ontology.

Without individuation as a constitutional metaphysical feature, furthermore, non-relational properties do not exist, all things being related. This means, further, that in a common unifying sense a primary explanatory feature of the world is also that of the relations between entities,


which, by extension, assume a defining ontology. Such relations are distinguished with respect to those in a metaphysics of things, however; indeed, such a metaphysics can be said to be one simply of relations since in the absence of the instantiation of intrinsic properties the relations in question are not determinable.

The openness to unrestricted change that is characteristic of such a philosophy, however, betrays its insensitivity to directed change; unlike philosophies premised on property supervenience, the creation of orientational parity here implicitly acknowledges the absence of directional forces that can underpin altered form, an acknowledgement apparently at odds with its evolutionary profession. Wolfe, for one, describes the ultimate destination of the logic of this trajectory ‘wherein an internally disordered, malleable, emergent human self exists in a relation of entwinement with a differential and differentiating external world’48 where movement toward any permanent state of higher complexity or integration is precluded, meaning that acquired distinctions are not subject to permanent retraction, a feature aptly characterized by Nietzsche’s cycles of ceaseless change.

3.2 Information: The Preferred Ontological Commitment

Noteworthy in such a metaphysics is the use of information to express a preferred ontological commitment. This means that in an impersonalist understanding information generates entity properties (a post Kantian predilection claiming conceptual independence from reality49; entities thus acquire the features of information. In a modern and positivistic understanding, however, information is related to the methodology of empiricism and to its epistemological character, which is to say that information is quantitatively and mathematically descriptive. In an empirical context this descriptive feature thus explicitly reveals the conformative nature of information, which, because it conforms to an object of study, determines the quantitative and qualitative features of said object. This conception dates itself at least to the Platonic notion of a wax tablet, which can be conformed to any shape with which it is impressed. Plato’s theory of forms, of which the wax tablet is a representative, is directed not simply to a static representation of a single ob-

ject of study but is intended also to offer a theoretical explication of the emergence of static imagery from dynamic possibility; thus, in the plasticity of the wax there is a transformable medium through which a multitude of forms can be realized. The impersonalist understanding thus constrains the sense of information use to its transmissive and variable aspect.

Information, in fact, is ontology, i.e., property, neutral since it is radically open to variance and has no independent meaning. In this context Brent Waters argues forcefully that the main tenet of these impersonalist visions is the profession that the world's only underlying and universal feature is information: ‘Since information has no inherent meaning it can be recast, conveyed and interpreted in virtually endless arrays. The fluidity of information means that all borders are temporary, and any definition permeable. Reality is a construct of shifting patterns of information within and through various media’.

Material entities are thus reduced to information patterns to be freely arranged and rearranged for any exigency and/or interest. In the context of contemporary technology the significant parameter is digital storage with its uploading of data driven manipulable arrays, and its iconic representation the virtual lives of cybernetic avatars In the impersonalist vision digitized resources thus constitute the medium by which the information paradigm is brought to reality.

Such use of information, moreover, reflects the impersonalist commitment to the world’s most basic feature, its existence. In a prominent modern metaphysical conception, at the basic level of the world there are only local properties instantiated in space-time points. Accidental properties that act as qualifiers, supervene on this distribution, which is to say a continuum of such points that thus constitute an informational matrix. In a Thomistic conception, likewise, categorical qualifiers supervene on a primitive thisness, which means that they share in existence.

‘...Since the actuality which is principally signifies is universally the actuality of every form, whether substantial or accidental, when we wish

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51 Ibid.
to signify that any form or act whatever actually exists in a subject, we express that fact by this verb is...\textsuperscript{54}.

Information, since it is openly descriptive is coextensive with this distribution, and so also expresses this property.

It is this understanding of information that impersonalistic architectures insert into a world of material things. Matter is thereby conformed to information, laying open the prospect of a new and radical transformation of its understanding. This is to say in the first place that the material world is recast into presentable patterns of information display where, bartered in information currency, individual form is lost, and single entities no longer categorically defined. Informational patterns and codes instead make up the substance of existence, including the human body; thus, implicated in this recasting is the body’s susceptibility to re-presentation. The loss of material structure in turn precludes any possibility for systemic integrity. The significance of the world as an objectifying presence that can determine relational and causal exchange is thereby eviscerated, now replaced with the immateriality of re-presentable form.

4. Value Contingency and Metaphysics in Personalistic Ethics

By emphasizing the distinctions that qualify entities, on the other hand, personalists claim that an explanandum for the world couched only in matter is insufficient, the additional and necessary explication thus constituted by the supervenience of qualitative distinctions that inhere in things. While personalists and impersonalists both accept the general Thomistic notion of shared material existence\textsuperscript{55} ‘...everything has being participatively; so that in it substance, sharing the act of existence, is other than this act which is shared....’\textsuperscript{56} a personalist metaphysics is distinguished from an impersonalist one in claiming that this necessary condition does not provide a causal explanation of form variance. In the personalist view they are distinguished because they possess qualities that are not uniformly distributed; hence, individuation is an intrinsic feature of this metaphysics.

Such a metaphysics characterizes said entities as simple; which is to say that their substance is all that qualifies them. Simple entities may, however, form larger associations, by virtue of which they become com-


\textsuperscript{56} J. F. ANDERSON, \textit{An Introduction to the Metaphysics of St Thomas Aquinas}, cit.
plex, i.e., they are multiply extended, such extensions admitting of new properties. In a person relating metaphysics, however, complex entities are not variably qualified; i.e., they admit of only a single quality set. Thus, the constant and unique connection in complex entities between set elements is, in fact, a consequence of their ‘real world’ properties.

These connections serve to distinguish the sorts of complex entities formed in personalist architectures from those formed in impersonalist ones, which constitute, instead, entity associations; therefore, relations between entities in the former differ fundamentally from those in the latter. They may, for example, or may not –since they are distinguished by their properties– establish relations with other entities; they may, therefore, possess qualitative properties that are non-relational. In a metaphysics of things, thus, the instantiation of intrinsic properties determines the sorts of relations that are supervening; indeed, whether supervenience exists. The structure of the ‘real world’, in consequence, is due to properties that determine relations between entities; thus, they bear the imprint of an ontological qualification. Moreover, such ‘epistemically real’ entities express causal interdependence; accordingly, relational determinacy is a defining feature of complex entities in a personalist metaphysics, which are, accordingly, operationally and integrally configured. Entities so configured are thus operationally ordered, the constitutive order adhering to a unique organizational principle\textsuperscript{57}. the structure of this order in consequence of determinate relations. Complex entities may, and do, however, establish indeterminate relations with other entities. Bunge characterizes said relations as temporally transitional that admit of sequential relational structures, which are not, accordingly, constitutive of entities but, rather, expressive of their operational activity.

In consequence, personalist frameworks, unlike impersonalist ones, deny that the characteristics of information determine the ontological features of the universe. In fact, their acceptance of the metaphysical realities of organization, structure, hierarchy, operational closure, and integration precludes in this metaphysics an explanatory role that is exclusively related to an unqualified continuum of space time points. The re-presentable nature of data sets that is radically open to the variance and inherent in an information ontology is here, rather, constrained by the supervenience of properties that determine information content.

The superposition of a world of properties onto a world of being means further that the domain of information is conformed to the properties of entities, which is to say that it is impressed with order; through individuation and entity dependent relations, therefore, the universe is structurally and operationally ordered. Accordingly, information is determined by, rather than determinative of, the ontological properties that structure the universe; thus, information does not define entities but rather transmits their properties.

Indeed, this role is confirmed in studies of naturally occurring, information based mechanisms such as the genetic code, where properties of proteins remain latent in the informational content of the code. Significantly, for the code to make available these properties the order of bases must be as physically indeterminate as the sequence of letters on a printed page, which means that the potential for expressive fidelity that arises from the patterned sequences can only be maximized if the generated orders are causally indifferent with respect to the physical properties of the encoded information.

Once the patterned sequence has been selected its permutation, however, must be sufficiently determinate to yield a single unambiguously chosen message, specifying a single molecular output, one previously dictated by the evolutionary success of its inherent and particular properties. These observations underscore two needed features for an information bearing mechanism in a physical, and not a re-presentable, world: its indeterminacy, i.e., its plasticity, with respect to its configurational possibilities, meaning its transparency to the reception of entity properties; and its determinacy, i.e., stability, with respect to their transmission. Impressed upon the code are thus the metaphysical features of the world, i.e., the categorical qualifications that define specific proteins, which the code faithfully transmits to the newly formed protein entities.

In fact, the evolution of different ways of transmitting categorical qualifications and their interpretation in information based formats can be treated as a major theme in the development of life. The evolution of natural mechanisms by which information, i.e., messages, are conveyed has enabled living systems to acquire an increasingly sophisticated and progressive hierarchy of properties. Queiroz and El-Hani argue

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that this progressive acquisition follows on a process of their successive emergence that is mediated through and in concert with a progressive evolution of information interpretive mechanisms; which understanding they site to the Peircean notion of the action of a sign, termed semiotic. In this conception the action of a sign is constituted by relations between three connected terms which constitute its minimal elements, a sign, an object which the sign represents, and an interpretant which yields the meaning of the sign. Key here is Peirce’s recognition that the interpretive meaning of the sign, i.e., its information content, conveys a representation of the properties of the object. Peirce describes this as a form or habit, i.e., a rule of action or permanence of relation, originating in the object that constrains the interpretant with respect to the sorts of messages that may be transmitted by the sign; this is to say that the sign physically instantiates qualities that are representative of the object and that will designate it as its sign, such qualities being intrinsic.

The physical processes thereby engaged by the action of the sign contribute to the emergence of a new levels of information use in living entities; whereby discrete subsets of relations are selected by an interpretive act that relates a source of information, i.e., the sign, with the particular subset in question, thus placing primary emphasis on the mechanism of interpretation. At each new emergent level components are grouped together to generate new arrangements with new properties that themselves generate successive and higher level combinations, each level being irreducible to its lower level constituents. Within individuals, the mind itself appears to emerge at the zenith of such a hierarchy with its own suite of properties. Gazzaniga\textsuperscript{61}, for one, proposes that the appearance of agency is directly attributable to a process of emergence from lower level neural properties.

Personalist architectures, in consequence, thus also claim that property hierarchy is intrinsic to a metaphysical understanding of the world and view the mind and its properties as the apex of a cumulative and irreducible, yet hierarchically ordered progression of properties\textsuperscript{62}. Among these is included reflexive awareness, i.e., subjectivity, with its perception of the self as the center of coherent and organizing activity\textsuperscript{63,64}. From the

self radiate a cluster of the mind’s highest level properties, properties that thus define and determine the material dimension of the human person, including the brain’s material contribution to self-agency, consciousness, identity, and relationality. Remarkably, the conception of the self is not abstract but has clear associations with a three dimensional physical image of the body. This image appears to depend upon a neural underpinning that is intimately linked to the body’s structure through topographical representations. The ontological features of the individual thus coalign with the corporeal dimensions of the individual, which constitutes in its material dimension the entity that is his qualified form/substance; this is to say that the mind and its properties are structurally integrated and localizable within the individual body, i.e., embedded, internal relations thus being temporally ordered and constituting those processes that give rise to the body’s operational configuration.

5. Personalistic and Impersonalistic Value contingency; Metaphysical implications for the Evolution of Normative Principle

Value theory, and indeed, normative science, patently describe how value contingent objects gain their attribution in virtue of their desirability. Consider in an Aquinas’ account the relationship between a good and an end ‘....everything having the nature of an end has also the nature of goodness...and that it be sought after by that which has not yet attained it...’65.

Aquinas, as did Aristotle before him, recognized that the division between what is and what can be had are not mutually indifferent. Propositional claims toward value contingent objects are thus such in consequence of inducing their attainment. Because of this they are presupposed in normative science as determinants that ground ethical theory, influencing not only the choice of manner for attaining a desired object but also any instrumental consequences that ensue. This is to say that the development of normative principle is conditioned by the metaphysical assumptions on which the value contingent object is premised. It means also, and in consequence, that value contingencies in impersonalist and personalist architectures will evolve fundamentally distinct normative principles since the metaphysical assumptions that ground such objects themselves differ.

65 J. F. Anderson, An Introduction to the Metaphysics of St Thomas Aquinas, cit.
Significantly, the impersonalist emphasis on indeterminate relations leads to its first counterintuitive metaphysical proposition that is normatively consequential; that material composition is immaterial to the relations so formed. This means that materials are understood in a primary sense; hence, they are attributed value on the basis of their constitutive presence. *They are significant because they are there.* Their identity is no longer significant as an aspect of their associations; hence, value becomes blind in the concealment of physical reality.

This separation from constitutive metaphysical features is the origin of added normative consequences. Since physical fact and value are divided, any object may be perceived as good. This means that any thing and everything can be valued said value increasing or decreasing independent of objective quality, and that any propositional value claim can be made. In the absence of a value reference, in consequence, value is flattened as a contingent and distinguishing attribute. This means, further, that the possibility of relative value, i.e., value hierarchy, is vitiated since no characteristic features exist for which value precedence can be claimed.

Human entities, in this conception, no longer occupy the apex of a hierarchy of valued objects; ontological properties, including subjectivity, sentience, agency, and the like, are equivalently valued with those of lower level states. Indeed, the notion of the person as the valued presence can no longer be presumed; ergo, the deconstruction of anthropocentrism with its premise of value contingent, ontological properties.

The notion of relations as dependent upon and linked to categorical features is, further; obviated since relations are no longer predicated on the properties of entities; which is akin to saying that any relation is equivalent, and any may be established, a position widely adopted in contemporary eco-ethics, for example, and embraced by theoretical models like that of Actor Network Theory. This understanding is propagated, moreover, through the presuppositions that ground information ontology, where variation and possibility are key. Here properties of mind and body are incorporated into representable information patterns and codes that make up the stuff of existence. Information alone, in its radical openness to variation, is therefore determinative and without limits to what can be attached.

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The loss of relative value and separable properties thus leads, finally and in consequence, to a position of value nullity. No longer distinguishable and no longer separable the prospect of value contingency becomes impotent, without force of application. The very meaning of value as a categorical referent is void since categorical accidentals cease to exist. Value is thus lost as a transcendental metaphysical feature. Indeed, the notion of a Thomistic good, as an end, is negated since there are no value differences; hence none to be oriented toward. The collapse of physical structure into immaterialism means that nothing is separable where distinctions do not exist. In the absence of a metaphysical association with material reality, values rest solely on propositional claims; hence, value can no longer function as an affirmation of a prioritively established good.

By contrast, the affirmation of physical reality in personalist approaches is fundamentally determinative for attributing value. Propositional claims in these architectures thus confirm, rather than assert, what is an intrinsic, i.e., irreducible and persistent, feature of real world objects. Their view that information communicates ‘real’ properties, further, means that the relations that are thereby communicated establish a wholly other type of unity than that achieved by impersonalist architectures; which is to say that a ‘personalist unity’ is premised on the ordered arrangements of property dependent relations.

Since value is grounded in real world properties, moreover, it follows that value differences between objects really do exist; this is to say that properties dictate the attachment of value not only laterally and qualitatively, but also hierarchically; thus, some values are more significant than others. Indeed, a hierarchy of values emerges naturally from a metaphysics of things, which is in consequence of their properties. Therefore the person is not arbitrarily valued, but occupies a position of value preeminence; so also one that is referential-ergo, anthropocentrism. Consider William James in context:

‘First of all, it appears that such words (‘good’, ‘obligation’) can have no application or relevancy in a world in which no sentient life exists. Imagine an absolutely material world, containing only physical and chemical facts, and existing from eternity with a God, without even an interested spectator: would there be any sense in saying of that world that one of its states is better than another?’69.

Indeed, the observer’s evaluation is crucial, Aquinas making this point his explication for the distinction between goodness and being ‘... Therefore goodness adds to being a certain reality...hence it adds affirmation to being...goodness must either add nothing to being, or if it adds something this must be according to reason only...’\textsuperscript{70}.

Said value is ‘good for’ the evaluator; which also means that in the referencing of good to the person, the person himself is made the referential norm, value inherence extending to the whole of the person entity, as James points out. \textit{It is thus in the unique ontological structure of the human being that personalist architectures identify the substrate that serves as the primordial value norm.}

6. Conclusion

Debate over the nature of value is surprisingly recent. There is little indication of this sort of questioning in the development of traditional normative theory, though impersonalism as a metaphysical or social concern is neither recent nor marginal. In the context of the ethical dimension of applied neuroscience the new circumstances have focused attention on the notion of distributed value, where value –sited in the new possibilities– is made a state function. As a contingent attribute it had traditionally been ascribed to a world of human beings whose evaluative contributions seemed essential, and where it was presupposed in a metaphysical context to supervene on a world of objects. The emergence of non person relating, thus value independent conceptions, however, has implicated new object-categories that distinguish the impersonalistic architectures from traditional personalist structures. These contingency distinctions possess their own suite of ontological properties for which a metaphysical claim is similarly made and for which the normative implications are therefore metaphysically conditioned.

The ensuing contention has thus centered on the nature of things that are given value, value constituting an accidental category that can only exist when present in some ‘thing’. The determination of the nature of things in the new thinking, though, had generally been preceded by an ascription of what was deemed desirable, and so the object of value siting had typically been deduced a fortiori, from which normative implications were then concluded. It is in this post hoc sense that a metaphysical re-interpretation of priority has been introduced; the Thomistic notion

that all things share in existence thus replacing as an explanandum the notion that all things guard their substance as they guard their existence, and so the reversal of form and being initiated by Heidegger\textsuperscript{71} replacing the priority of form in an Aristotelian and Thomistic metaphysics.

The absence of metaphysical constraints characterizing the latter, in consequence, really does avail the prospect of a worldwide contingency. The paradox that ensues, however, is a notion of value without distinction, for in the lack of distinctions no thing is discernibly better than any other thing, and value as a conditioning accidental is emptied of its contingent content.

In the broader context of this paper’s introduction, impersonalism remains a dominant influence in modernity, one yet challenging the ethical and moral dimensions of culture and polity\textsuperscript{72,73}, and one, notably, that excises the individual for a pre-grounding in being. It is in this non-differentiated sense that it poses a specifically metaphysical challenge to the individuation that has distinguished transparent Western traditions of substance and form and that has served to undergird their personalist values.


\textsuperscript{73} Ibid.