



INNATENESS OR MODULARITY? A REFLECTION ON THE DISAGREEMENT OVER THE SOURCE AND CONTENT OF HUMAN COGNITION

Abraham Akpen Jov & Benedict Michael Shamijah

Department of Philosophy, Rev. Fr. Moses Orshio Adasu University, Makurdi
akpenab@yahoo.co.uk; bmichael@bsum.ed.ng, benmike3@gmail.com

Abstract

The need for epistemic growth is an evidence of the groans of human epistemic deficit of perfection. Down the line, this signals a continual need for advancement in epistemic levels. An endeavor towards epistemic improvement has so much to gain from peer disagreement, which has the potential to bring about a change or affirmation or improvement of formerly held beliefs and epistemic positions. An epistemology of disagreement is that founded on peer epistemic contention and its vast possibilities for the shaping, reshaping, affirmation and discarding of certain knowledge claims or arguments. Using various written sources, this paper exposes the various points from opposing sides on the disagreement concerning whether the human mind has innate ideas or modules as structures constituting the basis and content of cognition. Upon reflection on the different positions, the paper concludes that modularity is a rebranded term for innateness with improved explanation of the workings of the mind. This impacts metaphysics, epistemology, and philosophy of language as well as philosophy of the mind, neurology and psychology.

Keywords: Innateness, Modularity, Disagreement, Content, Human Cognition

Introduction

The source of concepts and ideas or the nature of cognition as related to the mind is about the most celebrated philosophical enterprise. It enjoys central place in epistemological discourses, generating debates in the exploration of the source and content of human cognition and knowledge. Such debates have progressed from the Platonian, Aristotelian and Kantian legacies to a dimension now that discourses the possibility of innate modules of the mind. A debate on innateness and modularity draws into disagreement Hume, Locke Descartes on the one hand and Fodor, Chomsky, Marslen Wilson and Tyler among others on the other hand. A moderation of the ongoing debate offers an alternative insight intended for possible resolution of the disagreement. It sees modularity as a new way of understanding innateness and its workings.

On Innateness

In the *Meno*, Plato (circa 428-348 BCE) shows how Socrates demonstrates the case of innate knowledge in how Meno, the boy, had innate knowledge of geometry. Plato's famous doctrine is thus that all our knowledge is innate and a property of the soul from a previous life such that sensory experience only provides the opportunity for recollection (Beakley B. et al, 691). Aristotle would see what Plato calls innate ideas as generalized concepts abstracted by the mind from a summation of sensory experience; thus giving a foundation to the doctrine of the universals.



Plato's doctrine of the innate ideas is accentuated by Descartes (1596-1650) albeit with a bit of nuance. Descartes argues that while general laws of geometry and resultant impact of stimuli like pain and sounds can be built up into ideas from experience; ideas of God, the soul and mathematical truths must be innate to the mind (Beakley B. et al, 684). It is noteworthy that Descartes designation of ideas as "innate only means that our intellect or 'faculty of thought' has the potential to think or reflect such ideas on the right occasion – not that the ideas exist performed in our minds or that anyone was thinking of God or geometry in the womb" (Beakley B. et al, 684). This opens up another nuance for considering what innate ideas might otherwise be as a step aside from Plato's original doctrine.

Following from Plato and yet taking exception from him, John Locke (1632-1704) has difficulty accepting the seeming suggestions of the doctrine of innateness; that something could be in the mind without our ever being aware of it (Beakley B. et al, 684). He argues that a child builds general concepts from inscribing particular experiences on the mind which *ab initio* was a *tabula rasa*. Locke's position fails to explain satisfactorily the origin of mathematical truths. Gottfried Wilhelm Leibniz (1646-1716) uses the instance of the failure of memory and habits to show, against Locke, that something can actually be in our mind without our ever being able to access it. This happens when memory fails us for a bit of time. I feel this point against Locke is not strong enough given that Locke may not possibly be unaware of instances when memory fails; and Leibniz could be carried away from the note of the difference between forgetting and not being aware that there is such and such information in the mind. Hence a person who forgets is certainly both aware of such a piece of information in the mind and that s/he is not able to retrieve it at a given bit of time. This is certainly different from not being aware that one has such and such in the mind. Leibniz might be mistaken here about Locke; nonetheless the argument on memory failure strengthens his agreement with Descartes on an understanding of innateness as mind-potentiality, hence forgetting means that there is something in the mind which could be retrieved at sometime. Thus like Descartes, Leibniz posits that 'innate' implies the "mind potentiality", disposition and tendency that develop into the right circumstances (Beakley B. et al, 684).

The disagreement on the meaning of innateness moves away from deciding for empiricism or idealism to establishing a basis for the philosophy of mind as a faculty of human cognition. This progression shows out by the introduction of arguments on modularity.

On Modularity

Johann Gasper Spurzheim and Franz Gall's work on Phrenology discusses the mind as possessing "distinct faculties applying to specific domains" (Beakley B. et al, 685). The mental faculties of Spurzheim and Gall differ from the traditional faculties like intellect or memory. He speaks rather of faculties for love, religious awe, self-esteem and causal connections as belonging to and forming the fabric of the mind constituents. These are not



understood to operate maximally all at an equal measure. This explains why one person may excel in certain areas than in others.

Taking arguments of Locke and Jerry Fodor concerning the learning of language, building up concepts and the linguistic faculty of the mind, the debate on innate ideas takes a new interesting dimension explored by the linguistic theory of Noam Chomsky. “Much of the current debate over innate ideas focuses not so much on general arguments over the need for innate knowledge, as on specific case studies in the cognitive sciences suggesting that the mind has innate parts, or “faculties” devoted to a particular subject matter” (Beakley B. et al, 685) like language. The innateness debate is thus raised to the discussion of whether or not there are such innate organs, structures, faculties or modules. Suppose that there is an innate idea also to be known as a “module”, trying to understand what would be its precise nature and cause is a point of intense disagreement as there is over the traditional Platonic notion of innateness.

Chomsky observes of language that the thousands of different languages obey certain laws of syntax in common; indicating that rules of grammar exist *a priori* as standards to which different languages adhere. This alludes to the position that the mind has innate parts or faculties that pass for mental organs or modules; and also that the modules are departmentalized into specific domains. Jean Piaget (1896-1980) rejects both that there are innate ideas and that ideas and knowledge come from unprocessed perception. He also rejects Chomsky’s idea of an innate language organ. Piaget posits that mental structures are not possessed from birth but are developed over time “the course of performing increasingly sophisticated actions. Beginning with general intelligence, and interacting with the world in the normal way, the child goes through a series of progressively more complex and sophisticated conceptual structures or ‘schemata’. Hence ‘an innate language would be inexplicable” (Beakley B. et al, 686).

Chomsky insists against Piaget that “the development of a language organ is no more problematic than the development of the mammalian eye or the cerebral cortex... He concludes that beings who can learn English do not rely solely on general learning mechanism” (Beakley B. et al, 686). Hillary Putman adds a voice to Piaget to disagree with Chomsky “on the question of the plausibility of a language organ, suggesting that the development of the mammalian eye appears to be more gradual than Chomsky claims” (Beakley B. et al, 686). Chomsky’s further argument against Piaget and Putman sounds much reasonable; that biological endowments, even if understood from evolutionary perspective, being heavily dependent on genetic coding, cannot be said to be reliant on social influence or learning as that is too minimal to be the entire unfolding predetermined process. Therefore “it is sensible to conclude that our different cognitive capacities – for language or vision and so on – are served by different specialized mental organs, or modules” (Beakley B. et al, 686). Chomsky observes that there is a link between innatism and modularity such that, those who argue against or for the older question of innatism or the newer focus on modularity, end up accepting or refuting both whichever way.



Fodors' Defense of Modularity

Jerry Fodor begins a case for modularity by a classical affirmation of a general innatism of concepts. He observes that to learn the meaning of a term in a natural language, one must state a rule for its meaning. Such rule is formulated in a language of thought. As this language of thought is capable of stating the meaning rule of the term that we can learn, it suggests that it “must already have built into it the conceptual resources to express all such meaning” (Beakley B. et al, 685). His theory of mental modules harmonizes the traditional mental faculties or structures such as intellect, memory and imagination with those mental structures identified by Spurzheim and Chomsky like love and language. He creates an overlap of the two mental structures: the traditional mental structures are here designated as horizontal faculties because they stretch over different domains of information. The other structures like language, love and so on are vertical faculties because they are mental mechanisms devoted to specific domains of cognition and human knowledge.

Fodor offers a characteristic definition of a mental modular input mechanism or system by outlining nine (9) operational features: (1) the modules are domain specific because they apply to specific subjects like grammar and visual shape. (2) the modules operate mandatorily since they operate freely and necessarily and we cannot help but behold a scene (3) their intermediate computerized steps are not available to the “central process” of mental state; only the final output of the modular system is available to the central mental process (4) their input system are usually fast (5) they are “informationally encapsulated, appealing only to their specific sensory input, not to general knowledge – so that classic illusion, for instance, cannot be corrected by our knowledge that the image is illusory” (Beakley B. et al, 687). (6) their outputs are shallow’ in the sense that they do not reveal the intermediate computing levels or steps involved in arriving at the final output (7) “input systems are associated with fixed specific neural structures” (Beakley B. et al, 687). (8) “They exhibit specific and characteristic types of breakdown, such as aphasia of linguistic comprehension and production” (Beakley B. et al, 687). (9) Their ontogeny exhibits a characteristic pace and sequencing (Beakley B. et al, 793). That is, “their development shows a characteristic schedule–language, for instance, following a definite schedule of normal acquisition” (Beakley B. et al, 687).

While Fodor would note that not all the features in the mental modular system are equally important, he holds that information encapsulation is the key feature of modularity. This gives modularity a place in contemporary epistemological cognitive discourse. However, modular theory has generated a considerable controversy and disagreement over modularity of mind.

Marslen-Wilson and Tyler's Disagreement against Modularists' positions

William Marslen and Lorraine K. Tyler fault Fodor's modular system on the experimental evidence of pragmatic factors of contextual background knowledge, and pre-information on established discourse structures. They label Fodor's modular theory as a mere attempt



to give a psychological role to Chomsky's linguistic theory. Upon the elimination of a separate module devoted specifically for the mental domain for the computation of grammatical structure, the entire argument of linguists for a mental modularity should as well be swept away. Neil Smith notes a relationship between the domain of intelligence and the challenge of language impairment in stroke patients. Considering the connections among language, thought and intelligence, Smith holds against Fodor and Chomsky that language is at best a quasi-module that applies only to conceptual tasks. Daniel Sperber does not disagree with the modular theory per se; however, he considers Fodor's 'central process' of conceptual reasoning as all but a modular unit. He disagrees that the 'unconstrained central process' defy theoretical explanation as Fodor would like to make us believe. Alternatively, he holds that there are rather vast perceptual and conceptual modules applying to various domains with possibility of complex interaction. The vast possibilities of the modules would allow for representations that enable us to think both about other representations of others' mind and of our own concepts. With such meta-representational module, Sperber argues that we can make sense of "an evolutionary framework of the human ability to reason about abstract domain such as theoretical physics" (Beakley B. et al, 688). The mind is thus presented as a patchwork of conceptual modules given to complex interactions which further explain the development of a diversity of human cultures.

Conclusion

The modular theory exhibits modern attempts to replace innateness with modularity. There is hardly any clear difference between innate ideas and the modules. Modularity represents furtherance on enquiry into the source of human ideas in the epistemological famous enterprise of the exploration of the content and workings of the seat of cognition, the mind. We gain from a major advancement achieved by Fodor's modular theory's grouping of mental faculties - actually innateness - into horizontal and vertical domains. From the foregoing, I hope it is understood, going forward, the perspective from where I would use innate ideas or concepts and module interchangeably where the context admits.

So far, the excursus on modularity has only led to a formulation of psychological theories of language and an attempt to explain correlativeness or interactions of ideas and the workings of the mind, as resource base for neurology. It is futile to make a choice for or against either or both innateness and modularity. Hence, modularity offers a present rebranding of the theory of innate ideas and further exposition of theories of the workings of the mind.

Works Cited

- Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print
- Chomsky N. *Rules and Representation*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print p.772 795



- _____. *On Cognitive Structures and Their Development: A Reply to Piaget*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print p. 751 – 755
- Descartes, R. *The Philosophical Writings of Descartes: The Correspondence*, John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny, eds. Cambridge: Cambridge University Press, 1991. Print
- _____. *The Meditations on First Philosophy* Huemar, M. ed. *Epistemology Contemporary Readings*. Routledge: New York. 2002. Print.
- Fodor J. A. *The Language of Thought*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print p. 733-739
- Leibniz G.W. *New Essays on Human Understanding*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print.
- Locke J. *An Essay Concerning Human Understanding*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print p. 706 – 715
- Piaget J. *The Psychogenesis of Knowledge and Its Epistemological Significance*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print p. 741 – 749
- Plato *Meno*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print p. 691 - 697
- Putman H. *What is Innate and Why: Comments of the Debate*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print p. 758 -770
- Spurzheim J.G. *Phrenology*, Beakley B. and Ludlow P. eds. *Philosophy of Mind: Classical Problems\Contemporary Issues* 2nd ed. PHI learning: Delhi 2013 Print p. 721 – 732