



WIKI-PHILOSOPHIZING IN A MARKETPLACE OF IDEAS: EVALUATING WIKIPEDIA'S ENTRIES ON SEVEN GREAT MINDS

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Introduction

Forced onto the radar of academics everywhere via the bibliographies of their students' papers, Wikipedia is an online encyclopedia built on the principle of allowing virtually anyone to contribute. Individuals can either author an original article or edit an already written entry. As of late August 2007, Wikipedia ([WK], 2007) had 1.98 million articles in its English language edition, along with versions in 250 other languages. Based on traffic rankings compiled by Alexa (2007), Wikipedia is the ninth most popular site in the world. Despite this vote of confidence, the Internet encyclopedia is not without its critics. The overriding complaint is that the encyclopedia's openness makes it possible for the well-meaning and poorly informed, alongside ignoramuses, vandals, and charlatans, to have their say in the content, leading inevitably to a chaotic heap of words riddled with fatal errors and omissions. Comparing Wikipedia to entering a washroom, an erstwhile editor of *Encyclopaedia Britannica* noted: "It may be obviously dirty, so that he knows to exercise great care, or it may seem fairly clean, so that he may be lulled into a false sense of security. What he certainly does not know is who has used the facilities before him" (McHenry qtd. Rosenzweig, 2005, pp. 24–25).

In this paper, I aim to test the quality of Wikipedia, sampling entries in a subject that is historically founded on a profound scepticism of mass participation in knowledge production, to wit, philosophy. Alfred North Whitehead famously described the history of philosophy as a footnote to Plato. And it was Plato who proposed an ideal regime in which intellectual tasks are reserved for a specially selected and rigorously trained elite, with a military class supporting them, and the bulk of the population consigned to economic activity. I evaluate Wikipedia's articles relating to seven top Western philosophers: Aristotle, Plato, Immanuel Kant, René Descartes, Georg W.F. Hegel, St. Thomas Aquinas, and John Locke. To deal with the problem of establishing an objective standard, a consensus list of notable topics in each of the seven philosophers is compiled out of a reading of four academically respected works, including philosophy reference books and histories of

philosophy. The results of this analysis are then set against each of the seven Wikipedia entries.

Ultimately, the aim is to gain a better sense of how a process of collaborative knowledge production—fitting, as we shall argue, the economists' model of perfect competition—stacks up against the Platonic tradition of relying on select individual intelligence. In other words, I test, via Wikipedia, the hypothesis that the marketplace of ideas ought to be relied upon as a social mechanism to generate valid information—or, as former US Supreme Court justice Oliver Wendell Holmes put it, “the best test of truth is the power of the thought to get itself accepted in the competition of the market” (qtd. in Sharpe et al., 2002, p. 126). What I find is that Wikipedia's performance (and by implication, that of the market of ideas it exhibits), is decidedly mixed. Though I uncover no errors, all of the articles examined are marred by omissions—in several cases, very significant ones.

This paper is organized as follows: In Part I, “Plato vs. Markets,” I survey the prevailing modes of knowledge production and distribution that Wikipedia is challenging with its competitive market model. The theoretical underpinnings of this model are also discussed in Part I, as is the empirical record educed thus far by journalists and scholars regarding Wikipedia's quality. Part II details the methodology implemented in this study. Part III comprises the analysis of Wikipedia's entries on the seven top philosophers versus the consensus interpretation generated out of the sample of four academic works. And finally, Part IV summarizes the analysis and offers a conclusion.

I. Plato vs. Markets

Reflecting the Platonic paradigm of individually generated expertise, the production and distribution of knowledge in Western societies has been entrusted to a set of institutions designed to identify, recruit, cultivate, support, and promote the brightest minds. Chief among these, of course, are the universities, which begin the process by sifting through their student applicant pools and only admitting the top members of this cohort into its classrooms. After gaining admission, undergraduates are continuously graded on a series of progressively more challenging intellectual tasks, with only the best performers in this competition given the opportunity to enter graduate schools and potentially pursue academic careers as originators and communicators of knowledge. Once the graduate school credentials have been successfully obtained—and today, a Ph.D. is pretty much *de rigeur*—individuals can ply

their trade as knowledge workers at a university, where generally they must publish original research in academic journals and books to remain in good standing and be eligible for promotion. In deciding what is published, and in determining thereby what is certified as knowledge, academic presses and journals evaluate submissions by soliciting the opinions of experts in the relevant field, a process formally referred to as “peer review.”

An analogous gatekeeper function is played by editors and producers in the media realm, the other major institutional disseminator of knowledge in our society. The television stations, radio outlets, film producers, newspapers, magazines, and non-academic publishing houses that constitute the other side of the knowledge industry reach a much larger slice of the population, and wield more influence on the day-to-day governance of societies than the academy. This is by virtue of the media’s greater accessibility (both physically and cognitively), as well as its tendency to focus more on popular interests and issues of current relevance. Relative to academia, the formal education training for those seeking to join the select few knowledge workers in the media is generally of shorter duration; the industry increasingly requires a university degree for entry and advancement, with specialized journalism and graduate degree credentials becoming more prevalent.

Much has been foolishly claimed over the last decade about how the Internet has transformed the world, but it would be no exaggeration to say that it has brought about a novel form of media, what *The Economist* magazine has recently called “participatory media” (Kluth, 2006). What distinguishes this new media from its traditional cousin is that anyone can create content for a mass audience online, a phenomenon with economic roots in the dramatic reduction of communication costs wrought by the Internet. The huge investments necessary in building an infrastructure to transmit messages on paper or over the airwaves to a large and dispersed populace tends to concentrate the production of information to a relatively small group of entities capable of realizing economies of scale. These few entities then enlist the services of individual experts to ensure the informational quality of their content. In the online universe, however, all one needs is an account with an Internet Service Provider (ISP) plus a computer loaded with the appropriate software, and one can create a website, contribute to a newsgroup or listserv, upload audio or video files that one has produced, or write a blog. The results, in turn, can in principle be viewed by everyone in the world with an Internet connection—a population currently estimated at just over 1 billion people (“World Internet,” 2007).

Many have exploited the opportunity to engage in the new, participatory media. According to the Pew Internet and Life Project, 57% of American teenagers have produced some kind of content for the Internet, whether in the form of videos, images, or texts (Kluth, 2006, p. 4). Technorati.com (2007), a website providing a search engine for blogs, currently keeps track of 71 million of the online journals, including a good number authored by members of the media and academy—the traditional knowledge establishment. Indeed, blogs have become the most politically influential of the participatory media forms, as evidenced after former CBS News anchor Dan Rather reported that former US President George W. Bush was the beneficiary of favours that enabled him to join the National Guard, and thus avoid potential military service in the Vietnam War. A few hours after the report was aired, bloggers were questioning the 1970s documents that Rather had adduced, pointing out that typewriters of the time could not have produced the typography of the papers (Levin, 2004). Another new media phenomenon is YouTube (2007), a website where one can watch, tag, rank, and discuss videos that people create and upload. In just under two years, YouTube has grown to host 70 million viewings per day on its site, enticing Google, the Internet's leading search engine, into paying a staggering \$1.65 billion of its own stock for the money-losing video sharing service (Maney, 2006).

Then there is Wikipedia, regularly placed within the constellation of new media as a democratic and participatory outlet. This might suggest that the online encyclopedia represents the novel application of a political process to the world of ideas—that, in other words, the voices of the many are displacing an intellectual aristocracy in deciding what counts as knowledge. However, Wikipedia does not hold votes upon the suitability of its entries; nor do a slate of candidate editors seek election, whereby a 50% + 1 rule, or some variation thereof, would be applied to resolve what, or who, makes up the encyclopedia's content.

Wikipedia is better seen as a test of an economic theory, namely, that of competitive markets. The democratic aspect that observers have rightly discerned in Wikipedia lies in the fact that all are equally entitled to input information. But this contribution is then subject to a market test in determining the Internet encyclopedia's output—what ends up being presented to its audience. On Wikipedia, democracy expresses itself within the confines of an economic system. For, like any market, Wikipedia exhibits buying and selling behaviour. When someone contributes to the encyclopedia, he or she is selling information. And when a person accepts what they read there, such that they do not act to change it, they have bought that information. As there is no equivalent of money, no measurable standard that is universally accepted in

exchanges, the informational transactions on Wikipedia are akin to the direct exchange of goods otherwise known as barter. Everything that can possibly assist in conveying ideas—from complete articles down to images, tables, graphs, equations, paragraphs, sentences, words, and even periods and commas—is up for negotiation on the Wikipedia intellectual exchange. This market is competitive precisely because the barriers to entry are minimal on the sell side, as evidenced by the involvement of tens of thousands of editors on the site. With so many sellers, no one would appear to have the ability to set the terms of intellectual exchange, or what one might loosely call Wikipedia's prices, by imposing their preferred information on buyers on an irrevocable basis. In the language of economics, no one has market power, the essential condition of a competitive market (Lipsey & Ragan, 2003, p. 207). This is what fundamentally distinguishes Wikipedia from a traditional encyclopedia such as *Britannica*, that commissions articles from reputable authorities. Because the number of these is much smaller than Wikipedia's corps of editors (who like to refer to themselves as Wikipedians), the writer in a conventional encyclopedia is closer to being an oligopolist or monopolist, holding more leeway in impressing his or her idiosyncratic views on readers, the latter having less access to alternative perspectives. To say that Wikipedia represents a competitive market is not to deny its collaborative nature. Thousands of people are obviously working jointly towards a common end, namely, the creation of a digital repository of knowledge; they have just agreed that their partnership will more effectively reach its goals if each is continually made accountable to others for whatever they contribute.

The grand promise of Wikipedia is that its competitive market structure will neutralize the biases of those in dominant positions and construct an intellectual architectonic that is closer to the truth. From an economic point of view, as modeled by Richard Posner (2003, pp. 693–710), the truth is whatever piece of information offered by a seller that all (or the overwhelming majority) of consumers have accepted, i.e., bought. Such a pragmatist theory of truth need not preclude the traditional philosophical notion of truth as the mind's correspondence with reality, if only because almost everyone (with the exception of the academic proponents of the social construction of knowledge) buys into the idea that rationality is about reflecting an objective order. On its own logic, the pragmatist theory points beyond itself. When the market of ideas converges on a particular claim, it can properly be said to merely signal the truth, a signal that one is forced to heed as a practical matter because of the enormous difficulties involved in validating someone's claim to have plumbed the real structure of things. If everyone has latched onto that same idea, there is a fairly good chance that it has become fixed in our minds from the influence of

the real world. Competitive markets in information potentially maximize the quality of this signal, insofar as the wide variety of perspectives and backgrounds brought to bear by buyers and sellers prevents biases from persisting. So too, a statement that withstands repeated challenges is more likely to be correct.

Economists widely acknowledge that competitive markets in general are vulnerable to failure; the trafficking of ideas is no exception. To avoid failure, several conditions must hold: (a) a critical mass of the participants must be reasonably informed concerning the subjects about which they read and write; (b) they must have interests across a wide enough spectrum of topics to satisfy the curiosity of a broad range of people; (c) participants must be motivated more by the regard for truth than by the desire to harm others, aggrandize themselves, or promote cherished beliefs; (d) the individual costs of correcting errors and omissions in a timely fashion must be minimal so that bad information is not allowed to persist.

Wikipedia can do little to directly affect (a) above without violating its own credo of not singling out intellectual authorities. As for (b), the array of subject-matter on Wikipedia far surpasses anything in traditional encyclopedias; the latest print edition of *Encyclopaedia Britannica* (2007) only has 65,000 articles compared to Wikipedia's 1.98 million. Hence, the site's development since its founding in 2001 has sought to assure the conditions stated in (c) and (d). Initially, there was minimal regulation of people's activities, with only one of the co-founders, Jimmy Wales, dealing with the editing wars that would periodically flare up on debatable topics (Schiff, 2006). But then, as these wars grew with the explosion of content, and incidences of vandalism proliferated, the online encyclopedia appointed administrators, of which as of this writing stand at 1,112 ("WK: List," 2007). Administrators have special powers to delete and restore articles, to protect against and open articles to revision, to change the design of article interfaces, as well as to block individuals from participating ("WK: Administrators," 2007). All the administrators are volunteers. Anyone can become an administrator if they have built a strong contribution record, with the majority of successful nominees to the position having edited articles for at least six months and, on average, having made 6,000–7,000 edits ("WK: Request for," 2007). Above the administrators is the arbitration committee, whose task it is to resolve disputes that administrators and users have not been able to manage ("WK: Arbitration," 2007). Wikipedia also enforces a "three revert rule" prohibiting a writer from making more than three edits to the same article within a twenty-four hour period ("WK: Three-revert rule," 2007). To make it easier for contributors to track article modifications, Wikipedia introduced a page listing recent changes

as well as a feature alerting registered users to edits in articles of interest to them.

Besides the implementation of additional features, rules, and regulations, Wikipedia has attempted to avert the failure of its information market by promoting a set of values, summarizing these as “five pillars.” First, participants are to acknowledge that Wikipedia is an encyclopedia. As such, it merely aims at summarizing received knowledge—in other words, no original research. Second, editors are enjoined to adopt a neutral point of view in their contributions (NPOV is the acronym used on the site). NPOV mandates that writers refrain from advancing opinions or value judgments; one should only assert facts or facts about opinions or value judgments. Befitting its commitment to market principles, the fact versus opinion/value distinction is established along pragmatic lines: “By ‘fact’ we mean ‘a piece of information about which there is no serious dispute’ ... By value or opinion, on the other hand, we mean ‘a piece of information about which there is some dispute’” (“WK: Neutral,” 2007). The third pillar states that Wikipedia content ought to be free of intellectual copyright restrictions, while the fourth encourages users to treat each other with civility, refraining especially from personal attacks and petty disagreements. To ensure that discussion is not chilled or diverted from content creation by the onset of a legalistic atmosphere, the fifth pillar reminds Wikipedians that there are no firm rules (“WK: Five Pillars,” 2007).

What does the evidence up to this point say about Wikipedia’s quality? A number of incidents do support the online encyclopedia’s sceptics. The most widely publicized of these concerned an entry about John Seigenthaler, a retired journalist who once worked as an Assistant Attorney General for Robert Kennedy. As a prank, Brian Chase edited the article on Seigenthaler, falsely alleging that he was involved in the assassinations of both Robert and John F. Kennedy in the 1960s. That statement went 132 days without being corrected, finding its way also into Reference.com and Answers.com, two popular information sources that draw on Wikipedia’s content (Seigenthaler, 2005). Some have deliberately placed mistakes into the site’s articles to test how long it would take for them to be discovered and removed. In one experiment, thirteen errors were deliberately inserted about Frederick Douglass having lived in Syracuse, New York for four years. In another, a political party in New Brunswick, Canada was said to have been destroyed by a scandal involving provision of prostitutes at an official party event (Read, 2006). One of Wikipedia’s co-founders, Larry Sanger, left the site a year after it launched because of quality concerns and has recently entered a joint venture to create a new online encyclopedia called Citizendium. Unlike Wikipedia, Citizendium will vet contributors for their qualifications (Waters, 2006). More positively,

however, the German computer magazine *c't* had experts grade the site's coverage of twenty-two fields versus Microsoft's *Encarta* encyclopedia and *Brockhaus Premium* (Kurzidim, 2004). Wikipedia received the highest grade of the three reference sources.

Despite its recent appearance, Wikipedia's quality has already been the subject of several academic studies. Andrew Lih (2004) constructs a set of quantitative metrics to evaluate Wikipedia's entries—such as average article size and average number of edits per article—and insinuates that the increase in both of these indicates an improvement in content quality between 2001–2004. The heart of the analysis, however, involves the deployment of the total number of edits per article along with the number of unique users. By these measures, Lee finds that quality markedly rises on Wikipedia articles cited by media outlets. Another quantitative analysis was performed by Kushal et al. (2004), who analyze the evolution of articles over time, as well as how quickly Wikipedia's contributors responded to the occurrence of vandalism, bias, and obscenity. Articles affected by obscene comments were restored (“reverted” in Wikipedia terminology) in a median time of 1.7 minutes, while entire article deletions were reverted at a median rate of 90.4 minutes. While these are impressive response times, the average figures for both were much higher, suggesting a few instances of misconduct that went unnoticed for an extended period of time. Stivila et al. (2005) adopt a more qualitative approach in evaluating Wikipedia; they analyze the discussion pages that accompany each article on the site, where users typically debate the merits of the content and give an account of their edits. The authors also consider featured articles chosen by Wikipedia's users to be highlighted on the main page, examining the deliberative process by which some of those entries were subsequently stripped of their featured status. Judging by criteria such as accuracy, completeness, consistency, and verifiability, Stivila et al. conclude that Wikipedians are strongly committed to quality.

Focusing on Wikipedia's treatment of history, Roy Rosenzweig (2006) offers a mixed picture, noting that its coverage of the United States between 1918 and 1945 contained mistakes and omissions, such as the National Industrial Recovery Act of 1935, the Ku Klux Klan, and female suffrage. He also observes that popular topics, like the history of US postage stamps, receive more attention than more serious matters such as the inter-war years. Still, Rosenzweig lauds Wikipedia for both its biographies (particularly those of obscure figures) and its accuracy in listing names, dates, and events. The most widely quoted study of Wikipedia was published in the prestigious science journal, *Nature*. This study features the blind review of forty-two science articles in Wikipedia as compared to their equivalents in *Encyclopaedia*

Britannica. It concluded that “the difference in accuracy was not particularly great: the average science entry in Wikipedia contained around four inaccuracies; Britannica, about three” (Giles, 2005). Summarizing the academic research, it is safe to say that it leans in favour of Wikipedia, though both the number of studies and the proportion of positive to negative points is not sufficient to establish any firm conclusions. Additional studies, especially those that probe into subject areas not systematically dealt with so far in the literature, are certainly warranted.

II. Methodology

In this study, I offer a content analysis of Wikipedia’s entries for seven famous Western philosophers. In choosing these figures, I singled out the seven philosophers who were most often cited in leading reference works and histories of Western philosophy, as calculated by Charles Murray (2003). In rank order, the seven top philosophers are: Aristotle, Plato, Immanuel Kant, René Descartes, Georg W.F. Hegel, Saint Thomas Aquinas, and John Locke. Each of the relevant Wikipedia articles have at least 750 edits—well over the average of 54 edits per article in the English version of the online encyclopedia (as of August 2006), leaving no question about the quality of these entries being compromised by the mere lack of contributors (“WK: List of Wikipedias,” 2007). In all cases, the number of unique editors is over 250, precluding any notion that the information market in the selected areas of Wikipedia is uncompetitive owing to the domination of a few writers.¹ In accord with the market model understanding of truth adopted by Wikipedia, the “facts” about the background, ideas, and arguments of these seven philosophers will consist of those propositions about which there is agreement in the leading summary accounts of those thinkers. Opinions about the philosophers will be made up of those propositions over which there is disagreement among those accounts. Both Wikipedia’s ability to record these facts and to avoid the expression of opinions will be used to gauge the online encyclopedia’s quality.

Four texts were used to evaluate Wikipedia: Bertrand Russell’s (1961) *A History of Western Philosophy*; Frederick Copleston’s (1962) eight volume series titled, *A History of Western Philosophy*; *The Oxford Companion to Philosophy*, edited by Ted Honderich (1995); and *The Columbia History of*

¹ Numbers were checked by using the edit count utility at:
<http://tools.wikimedia.de/~daniel/WikiSense/Contributors.php>

Western Philosophy, edited by Richard Popkin (1999). The first two are well-respected histories, one authored by an atheist associated with analytic philosophy and the other by a Jesuit Catholic follower of Thomism. The Oxford and Columbia works add to the diversity of the sample, as these contain a wide variety of leading scholars offering their interpretations of the great thinkers. Adding Russell and Copleston to the scholars with articles in these two books brings the number of academic authorities consulted to assess Wikipedia to a total of 16, enhancing the robustness of the consensus garnered from their summaries. By these standards, it might appear that a bias has crept in against Wikipedia right from the start, inasmuch as it is being judged against what its traditional rival in the academy has certified as worthy information. Let us recall, however, that Wikipedia explicitly directs its contributors to rely upon available sources; its prohibition against original scholarship and its commitment to NPOV privileges consensus views. As I am focusing on such views, and since academic writings are the chief source of available interpretations of philosophers, I am merely judging Wikipedia by way of its own criteria.

For each philosopher, I read what each of the four sources said about their life and thought. With respect to their lives, I noted dates, such as when the philosopher was born and died, along with details about where they lived, studied, travelled, taught, as well as with whom they associated, what they published, and so forth. As to their thought, I recorded the terms, concepts, claims, arguments, and conclusions that the expert author deemed worthy of explanation in summarizing the philosopher's teaching. All this was organized into different themes. The philosopher's biography was treated as a single theme (as any attempt to break this information down was apt to generate an unwieldy number of items). While I strove as much as possible to let the authors speak for themselves (as it were), and to let them determine the nature of the themes, the application of judgment on my part was inevitable, even if only unconsciously. In my defence, let it be stated that any contribution made by me to the framing of the themes went through the prism of someone whose education has rendered him intimately familiar with the perennial issues of philosophy.

All of the entries were downloaded on January 10, 2007. The consensus view was defined so as to include themes that were addressed by at least 3 out of the 4 authors consulted. Afterwards, I inspected the relevant Wikipedia article and noted the presence of consensus themes. In this way, a rough quantitative measure of Wikipedia's quality was tabulated as a percentage of its coverage of the expert consensus. I refer to this as a "rough metric," since it does not capture the extent to which Wikipedia elaborates on the themes

relative to the chosen authorities. Nor is this metric capable of identifying errors, contradictions, nuances, or biases. For this reason, I also provide a qualitative analysis of each Wikipedia entry. Rather than presenting the seven philosophers in historical sequence, they are listed in the order of their significance in accordance with Charles Murray's ranking.

III. Analysis of Wikipedia Articles

1. *Aristotle*

Wikipedia's entry on Aristotle opens by correctly specifying his probable dates of birth and death (WK: "Aristotle," 2007).² After issuing the obligatory note about his foundational role in Western philosophy, the online encyclopedia follows the expert summaries in pointing out that the existing corpus of his work is limited to lecture notes. It remarks that Aristotle wrote dialogues, as did Plato, but notes that these have been lost. Wikipedia also hits the mark by acknowledging the wide range of Aristotle's intellectual interests, encompassing fields such as metaphysics, physics, biology, psychology, ethics, politics, and aesthetics.

Wikipedia diverges from my sample of commentators in the level of detail it presents in the biography section. Like the commentators, the entry covers the main elements of Aristotle's background and life: his family's connection to medicine; his time as a student of Plato in the Academy at Athens; his departure from the Academy upon Plato's death and his subsequent tutoring of Alexander the Great; his eventual return to Athens, where he completed the bulk of his philosophic work over a twelve year period; and his escape from Athens after Alexander's death, followed soon afterwards by his own death. The Wikipedia entry offers more details about Aristotle's life, discussing, for example his mother, the early education provided by his uncle, and his personal relationship with Plato. Wikipedia even mentions a meeting that Aristotle allegedly had with a prominent Jewish figure.

But if the biography section is notable for its detail, the sections that address Aristotle's thought are remarkable for their lack of depth and comprehensiveness. In dealing with the question of methodology, Aristotle's understanding of science is properly described as emphasizing the explication of essences and universals and as being more inductive in approach than Plato's

² The sources consulted for Aristotle were: Copleston (1962b, pp. 9–122); Russell (1961, pp. 173–217); Charles (1995); Bodeus (1999); and Press (1999).

teaching. So, too, the contrast is well made between Aristotle's view that universals are contained within the particular objects of sense-experience against Plato's insistence that universals are separate. But then Wikipedia fails to capture the primacy that Aristotle continued to give to deduction, a primacy which is merely alluded to when he is said to have suggested that "facts must be collected before an axiomatized deductive science can be built" ("WK: Aristotle," 2007). Aristotle's discovery of the syllogism is merely stated, with no elaboration through examples and no mention of the logical necessity peculiar to that mode of reasoning. Instead, we are mostly treated to a list of the books constituting Aristotle's writings on logic.

Wikipedia's treatment of the Greek philosopher's metaphysics does respect the expert consensus in focusing on the four causes—formal, material, efficient, and final—that Aristotle identifies as necessary for giving a full account of a phenomenon. The notion of substance is set forth, as is Aristotle's thesis that all objects are composed of matter and form. The correspondence of matter to potentiality and form to actuality is also laid out, as per the authorities, and is then connected, if vaguely, to Aristotle's explanation of change as the actualization of an already existing potentiality. All this is marred, however, by the inclusion of a discussion on chance that is not reflected in the expert summaries. Not reflected, either, is Wikipedia's listing of Aristotle's five basic elements of the universe. Though Wikipedia devotes several paragraphs to Aristotle's teleological conception of the universe, it falls short by not underlining his overriding concern with ascertaining final causes. Most startling is the complete absence of any reference to Aristotle's contention that the universe is eternal, rather than created at a beginning point in time. Missing, too, is any indication that Aristotle believed in a god that causes motion in the universe, while being himself without motion.

Additional gaps come to light when we are brought down to earth and confronted with Aristotle's views on topics relating to human nature and society. Unlike the commentators surveyed, nothing is written in Wikipedia about Aristotle's conception of the human soul and body as constituting a unified entity. Nor is there a statement about Aristotle's theory of cognition, according to which the mind is causally impacted by the forms of the objects that it perceives. Wikipedia does refer to the centrality of happiness (*eudaimonia*) in Aristotle's ethics, his famous doctrine that moral virtue is a mean between opposing vices, in addition to his claim that individuals become virtuous by continually engaging in moral conduct until it finally becomes habitual. Still, the distinction is not made between intellectual and moral virtues, to wit, between qualities that perfect the mind and those that regulate the will. A significant flaw as well is that those who consult Wikipedia are not

informed of Aristotle's opinion that the best life consists in philosophic contemplation, inasmuch as it fully exercises the rational faculties that distinguish us as human beings and liken us to the divine essence.

As if that were not enough, Wikipedia in no way addresses Aristotle's political thought. We read nothing about his assertion that human beings are by nature political animals; that government ought to do more than promote economic growth, or that it should instead focus on education with a view to cultivating flourishing souls. Nor is there any reference to Aristotle's notorious argument that slavery has a natural basis. Nowhere in sight are his strictures against lending on interest or the criticisms he levelled against the utopian regime that Plato drafted in *The Republic*. The closest that Wikipedia comes to politics is a paragraph on Aristotle's theory of justice. Even then, the emphasis is on particular versus general justice, whereas the experts converge on the difference between remedial and distributive justice, the former encompassing the harm done by one party to another, and the latter having to do with the allocation of goods relative to personal merit.

Table 1 presents a summary of my findings. I identified 32 themes that were deemed worthy of notice in the experts' interpretations of Aristotle that appeared in 3 of the four books. Of the 32 themes, Wikipedia only covered half.

Table 1: Notable Themes in Aristotle—Expert Summaries vs. Wikipedia

Theme	Columbia	Copleston	Oxford	Russell	Wikipedia
Biography	X	X	X	X	X
Philosophical Interests	X	X	X	X	X
Form of extant writings	X	X	X	X	X
Substance	X	X	X	X	X
Essence		X	X	X	X
Universals	X	X	X	X	X
Matter & form	X	X	X	X	X
Teleology	X	X	X	X	X
Actuality vs. potentiality	X	X	X	X	X

Four Causes	X	X		X	X
Change	X	X		X	X
God	X	X		X	
Eternity of Universe	X	X		X	
Syllogism	X	X	X	X	X
Primacy of deduction	X	X	X	X	
Empiricist Tendency	X	X		X	X
Soul/body	X	X		X	
Cognition	X	X	X	X	
Eternity of Intellect	X	X		X	
Eudaimonistic ethics	X	X	X	X	X
Intellectual and moral virtues	X	X		X	
Golden Mean		X		X	X
Habituation to Moral Virtue	X	X		X	X
Best life is Contemplation	X	X	X	X	
Justice: Remedial vs. Distributive	X	X		X	
Friendship	X	X		X	
Political animals	X	X	X	X	
State's proper aims	X	X	X	X	
Best regime	X	X	X	X	
Critique of Plato's utopia	X	X	X	X	
Against Usury		X	X	X	

Defence of Slavery		X	X	X	
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2. Plato

The Internet encyclopedia's hit rate, as Table 2 below indicates, was slightly better with Plato, with Wikipedia referring to 15 out of the 23 topics (65%) gleaned from our sample of philosophic authorities ("WK: Plato," 2007).³ When I go behind this numerical proxy of Wikipedia's value to a qualitative analysis, I discover shortcomings analogous to those found with the entry on Aristotle.

This time, the biographic details do not go much beyond what our commentators outline as a group. Plato's birth date is listed as either 428 or 427 BCE, reflecting the uncertainty of the authorities. Duly noted, too, is his aristocratic family background. The Plato entry is perhaps too cautious in stating that Plato may have travelled to Cyrene, Italy, and Sicily, though the veracity of the last two is doubted. Properly articulated is the fact that Plato founded the Academy and that this was one of the first organized schools in the Western world. Well noted also is that Plato was taught by Socrates and that it is uncertain whether Plato was part of Socrates' inner circle. Interestingly, Wikipedia refers to the story that Plato was originally named Aristocles and then saw it changed to Platon because of his strong physique. Only one of the sources consulted mention that story and even then it was questioned (Copleston, 1962a, p. 151). Plato's year of death is correctly specified as 347 BCE.

Wikipedia deviates significantly from the consensus by viewing Plato's dialogues as literary creations and therefore more fruitfully plumbed for their settings, characters, narration, themes, metaphors, and story lines and less so as a unique mode of philosophic writing from which to mine the Greek thinker's ideas. Associated with Paul Friedlander (1969) and Leo Strauss (1975), this approach to Plato is noted in only one of the expert essays, namely, the *Columbia Encyclopedia* (Press, 1999). Within the dialogues themselves, Plato is never put forward as an interlocutor. The question therefore naturally arises as to whether Plato's main character, Socrates, serves as a mouthpiece for the author's views. There is an apparent contradiction in Wikipedia's answer to this question, inasmuch as the entry first advances the opinion that the real Socrates

³ For Plato, Wikipedia was evaluated against the following: Copleston (1962a, pp. 151–288); Russell (1961, pp. 122–172); Press (1999); and Bostock (1995).

speaks in dialogues concerned with virtue, and that he is the spokesman for Plato's own views when the topics become more abstract and metaphysical. At the same time, the thesis that Socrates comes out in the early dialogues, but is then progressively taken over by Plato in the middle to late dialogues, is disputed, even though the trend over time in Plato's works was to move from morality to metaphysics. Indeed, Wikipedia devotes an inordinate amount of coverage to Socrates, dealing with why he never committed any of his ideas to words, how women figure prominently in his thinking, along with salacious speculations as to whether he harboured pederastic inclinations. These matters are not replicated in the expert samples.

Wikipedia takes up Plato's best-known theories, including the theory of forms, in which general terms are posited as referring to a set of intelligible objects separate from the concrete and empirically sensed items that partake of them. Also indicated is Plato's contention that the forms are eternal and more real than the ephemeral particulars that imitate them; that two levels of reality exist, with the conceptual order being higher than its sense-experienced counterpart. The same is the case with the knowledge and opinion dichotomy, allegorically expressed in Plato's image of the cave, where knowledge is depicted as the intellect's grasp of the abiding and necessary truth, which the forms embody, and opinion as the mind's confinement to the shifting contingencies of the empirical world. Wikipedians discuss Plato's utopia, in line with the experts, citing his call for philosophers to be kings, and the division of the ideal society into the guardian, auxiliary, and labouring classes. Wikipedia covers the importance that Plato placed on educating the ruling classes, his advocacy of female equality, and his views on censorship and communism.

Forgotten, however, is that Plato outlined a more practically realizable regime in *The Laws*. Contrary to the expert consensus, moreover, Wikipedia makes no mention of Plato's support for eugenics in *The Republic*. Though the online reference tool states that Plato's articulation of the ideal government is meant to uncover the proper functioning of individual souls, the connection of this point to the quest for justice is lost. This may be why Wikipedia fails to educate its readers about the definition of justice that Plato advances, namely, that it consists in the minding of one's own business and manifests itself in a properly ordered soul wherein reason rules the passions. Plato's tripartite division of the soul into reason, spiritedness, and desire is only mentioned in passing, during an explanation of the ideal city's three classes. There is nothing on the paradoxical claim that virtue is knowledge. Wikipedia gives an account of Plato's suggestion of a form that unites all forms, what the online encyclopedia's writers call an "Ultimate form," though the more common term

for this used in the expert summaries, the idea of the Good, goes unstated. That Wikipedia sets forth nothing about Plato's physics, particularly the notion that God created the universe out of a chaotic situation in accord with the patterns contained within the forms, and that, therefore, the natural order is animated by intelligence, is a huge lacuna.

Table 2: Notable Themes in Plato—Expert Summaries vs. Wikipedia

Theme	Columbia	Copleston	Oxford	Russell	Wikipedia
Biography	X	X	X	X	X
Dialogues	X	X	X		X
Socrates	X	X	X	X	X
Forms	X	X	X	X	X
The Good	X	X		X	
Knowledge vs. Opinion	X	X	X	X	X
Conceptual Reality vs. Sensual Appearance	X	X	X	X	X
Cave allegory	X	X	X	X	X
Body/Soul	X	X		X	X
3 parts of soul	X	X	X		X
Soul's immortality	X	X	X	X	X
Knowledge as recollection	X	X	X	X	X
Creation of universe	X	X		X	
The cosmos	X	X		X	
Virtue is knowledge	X	X	X	X	
Eros	X	X		X	X
Philosophers should be	X	X	X	X	X

kings					
Three classes in ideal regime	X	X		X	X
Censorship	X	X	X	X	X
Communism	X	X		X	
Justice is harmonious soul	X	X	X		
Justice is minding one's own business	X	X		X	
Eugenics	X	X		X	

3. Immanuel Kant

Wikipedia performs competently in its biographic overview of the eighteenth-century German philosopher (“WK: Immanuel Kant,” 2007).⁴ Wikipedia was in agreement with the experts that Kant was born in Königsberg and stayed most of his life there, studying at the local university and then subsequently teaching at his alma mater. They also concur about his Pietist upbringing, disciplined lifestyle, and his early following of the Leibnizian school of philosophy. No consensus exists as to whether Kant’s writings can be divided up into two or three periods, but there is agreement that he devoted the early part of his career to science and metaphysics, and then emerged out of a “silent decade” to publish the three Critiques, the most important being *The Critique of Pure Reason*. Wikipedia sketches additional useful details not encapsulated in the expert consensus, such as the observation that *The Critique of Pure Reason* was initially met with silence, that Kant was a gregarious individual despite his self-discipline, and that his ground-breaking philosophic work was sparked after David Hume awoke him out of his “dogmatic slumber.” Strange, however, is the inclusion of a paragraph on Kant’s tomb, how it was destroyed by Russian bombs during World War II, and then later replaced by a donated statue.

⁴ For Kant, I checked Wikipedia against: Copleston (1964b, pp. 209–241 and 1964b, pp.7–183); Russell (1961, pp. 675–690); Allison (1995); and Ameriks (1999).

In a pattern evident within all the entries examined, Wikipedia's quality is more uneven in its summary of the philosopher's system. The experts are in accord that Kant was primarily motivated by the possibility of metaphysics, understood as a type of knowledge that transcends sense-experience. Kant adds that the subject-matter of metaphysics ultimately breaks down to God, the soul, and free will. While Wikipedia opens its account of Kant's philosophy by pointing out the centrality of these three topics, it does not place them within his larger metaphysical concerns. Consequently, it loses sight of Kant's emphasis on synthetic *a priori* propositions, the very type of statements at issue regarding the possibility of metaphysics, insofar as these assert knowledge of things independent of both pre-existing linguistic definitions and experience. It is true that Wikipedia follows the consensus view by relating the distinction between synthetic and analytic propositions (the latter being unlike the former in being contained within linguistic definitions), and enquiring into their relationship with both experience and *a priori* understanding. The consensus is also heeded concerning Kant's claim that mathematics falls under the category of the synthetic *a priori*. But Wikipedia fails to do likewise with geometry.

As for the Copernican revolution that Kant inaugurated to address the viability of metaphysics, Wikipedia outlines the nature of that revolution, and how Kant opted to picture knowledge as a matter of objects conforming to the mind as opposed to the traditional route of portraying it as the mind's submission to reality. The online encyclopedia also does an adequate job of explaining how the mind, in Kant's view, structures our experience of the world through a set of *a priori* categories by, among other things, framing objects within space and time. The resulting two-level theory of reality is set forth, according to which the mind is incapable of grasping the realm of things-in-themselves, constituted as it is to perceive the world through an array of *a priori* lenses. To its credit, Wikipedia alludes to the debate surrounding the aptness of attributing a two-level reality theory to Kant. Some scholars reject the interpretation that Kant is asserting the existence of a separate ontological domain in speaking of things-in-themselves, but is rather expressing the idea that arises when the mind attempts to think beyond its structural confines. In any event, the expert consensus does not support the latter perspective, nor, apparently, is it deemed worthy of debate. More objectionable is that Wikipedia likens Kant's position to that suggested in Plato's allegory of the cave. Both thinkers are said to hold that sense-experience is limited to shadows of real things—a strange comparison, if only because Kant is not saying that the things we experience are lesser in degree than the real stuff, but that our experience takes place within a cognitive framework. This connection between Plato and Kant is not drawn in any of the consulted summaries. What is more, Wikipedia

is silent about Kant's insistence that causality and substance are concepts that the mind adds to experience, alongside space and time, via its *a priori* categories. Not to be seen, either, is the consensus reference to Kant's antinomies, the metaphysical contradictions generated from treating the experienced universe as if it were objective reality.

Of the three topics that constitute metaphysics for Kant, Wikipedia accounts for two. It correctly reports Kant's claim that God's existence is not theoretically demonstrable, though no elaboration is given of the way he criticizes the ontological, cosmological, and teleological arguments, as do the majority of the authorities I considered. The moral case for God and the after-life is put forward. Kant taught that these are necessary presuppositions to make sense of the moral life, for otherwise there would be no guarantee of virtue and happiness ultimately coming together or, more precisely, that those who act morally end up with the happiness that they deserve. Unfortunately, this point is made in Wikipedia by a series of quotes from Kant, instead of having it put in the contributors' own words. According to my expert sample, Kant additionally postulates freedom of the will on moral grounds, which Wikipedia acknowledges. But this is hardly noticeable amidst two rather convoluted paragraphs and, moreover, no indication is provided of Kant's argument that free will is conceivable precisely because human beings partake in the realm of things-in-themselves, where cause and effect relations do not apply.

The main elements of Kant's moral theory are outlined fairly well. In accord with every expert account, Wikipedia refers to the categorical imperative, along with its various formulations, two of which figure prominently in the consensus view: the maxim that an act is moral if it can logically be framed as a universal policy, as well as the directive enjoining us to treat others as ends-in-themselves, as beings with their own needs and aspirations, rather than using others as means for our own selfish purposes. Wikipedia's treatment of Kant's morality is supplemented with a discussion of his aesthetics and political thought, which some of the academic commentators discussed, though not enough for a consensus.

Table 3 indicates 18 themes in Kant that the experts agreed were worth covering. Of those 18, Wikipedia dealt with 11 (61%).

Table 3: Notable Themes in Immanuel Kant—Expert Summaries vs. Wikipedia

Theme	Columbia	Copleston	Oxford	Russell	Wikipedia
Biography	X	X	X	X	X
Concern with possibility of metaphysics	X	X	X		
Synthetic vs. Analytic propositions		X	X	X	X
Focus on synthetic <i>a priori</i>		X	X	X	
<i>A priori</i> and mathematics		X	X	X	X
<i>A priori</i> and geometry	X	X	X	X	
Copernican revolution in philosophy	X	X	X	X	X
Experienced world vs. things in themselves	X	X	X	X	X
Space-time	X	X	X	X	X
<i>A priori</i> categories of Cause and Substance	X	X	X	X	
Antinomies	X	X	X	X	
Opposition to traditional arguments for God	X	X		X	X
Practical-Moral case for God	X	X	X	X	X
Possibility of Free will	X	X	X	X	

Categorical Imperative	X	X	X	X	X
Autonomy		X	X	X	X
Moral necessity of after-life		X	X	X	X
Mental necessity of teleology	X	X	X		

4. René Descartes

Reflecting a penchant for odd bits of information, the entry on René Descartes begins with the remark that the seventeenth-century French philosopher is also known as Renatus Cartesius, something that none of the authors consulted happened to mention (“WK: René Descartes,” 2007).⁵ Otherwise, the biographic portion is solid, with Wikipedia indicating that Descartes was born in 1596, went to a Jesuit school in La Flèche, France, served time in the army, and lived in Paris before spending approximately twenty years in Holland. Wikipedia states correctly that Descartes was invited to be a tutor to Queen Christina of Sweden. He died soon thereafter in 1650. It is also noted that the habitually late-rising philosopher was forced to give lessons early in the morning to meet Christina’s schedule. As the Swedish mornings were cold, Descartes may have contracted pneumonia as a result. Wikipedia nicely hedges this account, though, in commenting that Descartes may have also acquired the disease from taking care of the ailing French ambassador to Sweden. The experts do not agree about which of these two factors were responsible for Descartes’ death, so Wikipedia’s hesitancy is wise.

The French philosopher’s widely acknowledged claim to be the founder of modern philosophy is registered in the Wikipedia entry. Nevertheless, the entry qualifies Descartes’ revolutionary credentials, following the sampled authors in recognizing the scholastic influences in his thought. The account of his system properly starts with the method of doubt, by which no assertion, no matter how well supported by authority or common sense, is initially taken for granted. Whatever survives this universal suspicion is deemed certain and forms the basis for the construction of Descartes’ philosophic architectonic.

⁵ With respect to Descartes, I looked at: Copleston (1963, pp. 74–160); Russell (1961, pp. 542–551); Cottingham (1995); and Bracken (1999).

Wikipedia explains the way he puts this methodological scepticism into practice by challenging the veracity of the senses. Unlike the expert summaries, however, Wikipedia neglects to cite the two most famous expressions of Cartesian scepticism: the dream quandary, in which Descartes holds that it is impossible to distinguish whether we are awake and engaged with the real world or mesmerized in a dream on the basis of the inner mental data available to us. Omitted, too, is Descartes' invocation of an evil god or genius who systematically fills our heads with delusive thoughts. Putting it in more contemporary terms, we can think of such a god projecting a fantastical movie in the theatre of our minds.

Even more famous is Descartes' *cogito ergo sum*, "I think therefore I am," and this Wikipedia duly captures. Having reached this stage of the argument, Descartes can only be certain of his own existence as a thinking being, leaving the external world of bodily objects and other persons still to establish. Harmonizing with the expert consensus, Wikipedia says that Descartes attempts to escape solipsism by bringing in God. Inasmuch as God is benevolent and responsible for creating human beings, He could not possibly deceive us in believing as we do that a world exists independently of our minds. Wikipedia, too, adequately alerts its readers to the charge of a vicious circle that this appeal to God has raised among commentators. For if we must demonstrate God to overcome doubt of our intellectual faculties, does not that same doubt preclude any confidence we might have in establishing the existence of a divine being?

Wikipedia mentions Descartes' body/soul dualism, but without delving into related issues. We read that body is conceived as extended and subject to physical laws, while the soul is not extended and beyond causal determination. That this conception of the soul enables Descartes to claim free will is not cited. The universally recognized difficulty that Descartes poses for himself in his accounting for the empirical fact of mind–body interaction, particularly when these two entities are defined by diametrically opposite characteristics, is also never broached. Occasionalism, the theory advanced by Nicolas Malebranche to explain the mind–body relationship, is not adumbrated as the outcome of Descartes' thought, as it is in the expert synopses. Nor is any space given over to the reasons Descartes put forward for maintaining the dualism of body and soul against the temptation of making the latter an epiphenomenon of the former, viz. that the mind's activities are far too complex to explain in terms of cause and effect.

Contributors to Wikipedia did cite Descartes' invention of analytic geometry. Likewise, they point to his discovery of the conservation of motion.

They do not present his claim, the bane of animal rights activists everywhere, that humans are fundamentally distinguished from the animals in that dogs, cats, bears, and so forth, lack a soul and are nothing more than bodily machines. A significant gap is the exclusion of “clear and distinct ideas,” a category that Descartes uses, for example, to describe *cogito ergo sum* and, more generally, as a criterion of truth.

Table 4 reveals that a scan of the authorities generated 18 themes in Descartes that the consensus determined were important. Of these 18, Wikipedia addressed 10 (56%).

Table 4: Notable Themes in René Descartes—Expert Summaries vs. Wikipedia

Theme	Columbia	Copleston	Oxford	Russell	Wikipedia
Biography	X	X	X	X	X
Founder of Modern philosophy		X	X	X	X
Inventor of Analytic geometry	X	X	X	X	X
Conservation of Motion	X	X	X	X	X
Method of Doubt		X	X	X	X
Doubt of senses		X	X	X	X
Dream Problem	X	X	X	X	
Demon hypothesis	X	X	X	X	
I think, therefore I am	X	X	X	X	X
Validation of external world via God	X	X	X	X	X
Vicious Circle	X	X	X		X

Clear and distinct ideas	X	X	X	X	
Matter vs. mind	X	X	X	X	X
Animals as machines	X	X	X	X	
Mind too complex to be reduced to matter	X	X	X		
Setting stage for occasionalism	X	X		X	
Problem of accounting for mind/body interaction	X	X	X	X	
Free will	X	X		X	

5. *Georg W.F. Hegel*

Given the extreme difficulty of comprehending Hegel's writings, it is not surprising that the expert summaries of his thought produced the smallest list of agreed themes among all philosophers examined.⁶ I identified thirteen such themes in the surveyed literature, of which Wikipedia addressed nine, for a 60% hit rate (Table 5). The numbers create an overly positive image of Wikipedia ("WK: Georg Willhem," 2007).

In the biography section—which takes up a smaller part of the article than is usual—the online encyclopedia hits the main points of Hegel's life related by our authorities. Thus, we are told that Hegel, born in 1770, taught at the Universities of Jena and Heidelberg, finishing his career at the University of Berlin, and died in 1831. Not mentioned, though, is that Hegel served as a tutor as well as the head of a high school in Nuremberg. But, unlike the experts, Wikipedia delves into the role of Hegel's mother in nurturing his intellectual

⁶ The summary for Hegel was made up of: Copleston (1965, pp. 194–294); Russell (1961, pp. 701–715); Singer (1995); and Rockmore (1999).

interests, Hegel's relationships with Friedrich Schelling and Friedrich Hölderlin, including his initial hopes of popularizing Kant's philosophy.

As to Hegel's thought, Wikipedia starts well in introducing his appeal to history as the key to solving the traditional problems of philosophy. Later in the article, this is developed with the remark that Hegel views history as progressing from one stage to the next out of the effort to resolve contradictions inherent in the previous period. We also read, in line with my authorities, that this progressive movement is driven by the imperative to realize the idea of freedom. Yet Wikipedia forcefully rejects the traditional understanding of this movement as involving the triad of antithesis, thesis, and synthesis. Only one of the authorities checked, in the Columbia encyclopedia, went this far (Rockmore, 1999, pp. 536–537). What Hegel means by freedom—his criticism of the liberal conception of that ideal as the absence of coercion in favour of a definition of freedom as the rational willing of a universal principle—is entirely untreated in Wikipedia. The Internet encyclopedia is also quite certain that Hegel's notion of freedom did not translate into the advocacy of the prevailing Prussian regime, though the expert summaries at best lean towards exonerating Hegel from this charge without a consensus.

“*Geist*” is a term Hegel used—often translated into English as mind or spirit—to designate a divine mind immanently manifested in every concrete phenomenon, institution, and practice, whether it be nature, individuals, civil societies, nations, religions, or states. Hegel's teaching is that human minds partake in this divine force and take it through the different stages of history through our own efforts to attain self-awareness. Before this point is reached, the human mind is limited by the spatio-temporal situation in which it is thinking and posits a subject–object dichotomy according to which we exist as mental beings confronted by, and trying cognitively to grasp, a non-mental realm. When self-consciousness is realized, it becomes evident that all reality is mental and constituted by the *Geist* in which we all participate. In this manner, Kant's things-in-themselves are eliminated. All these points agreed upon in the expert summaries are covered by Wikipedia, except for the historical conditioning of thought.

Where Wikipedia is seriously lacking is in Hegel's moral philosophy. The authors sampled acknowledged the well-known fact that Hegel criticized Kant's categorical imperative for being too formal and abstract. For Hegel, morality always involves a particular community's shared interpretation of its obligations, an interpretation reflecting the exigencies of the period, the way of thinking that has been inherited, and all this firmly embedded in familial, social,

religious, economic, and political practices. None of this is echoed in Wikipedia.

Instead, an inordinate amount of writing is devoted to Hegel's influence on the history of philosophy. Several paragraphs lay out the divide between left and right Hegelians—between those who saw Hegel as logically culminating in an atheistic and revolutionary politics and those who take him as a basically pro-Christian defender of the prevailing order—even though only one expert source goes into detail about the matter (Copleston, 1965, pp. 291–294). Several pages, too, are handed over to a wide ranging discussion of Hegel's detractors and supporters. Between the two, it is not hard to notice that Wikipedia tends to side with the detractors, with quotes highlighted from Arthur Schopenhauer and Carl G. Jung, the former alleging that Hegel disguises a heap of nonsense beneath the opacity of his prose, and the latter insisting that his hyper-abstract wording reveals the unconscious typical of a schizophrenic. George Santayana is featured as saying that Hegel rationalized might as right. Both the Santayana and Jung passages are prominently placed in textboxes. No such treatment is afforded to Hegel's supporters. This is definitely one Wikipedia article where a charge of violating its own neutrality policy conceivably sticks.

Table 5: Notable Themes in Georg W.F. Hegel—Expert Summaries vs. Wikipedia

Theme	Columbia	Copleston	Oxford	Russell	Wikipedia
Biography	X	X	X	X	X
History is progressive		X	X	X	X
History driven by ideas	X	X	X	X	X
Thought is historically conditioned	X	X	X		
Dialectic	X	X	X	X	X
<i>Geist</i> /Spirit/Mind	X	X	X	X	X
Idealism	X	X	X	X	X
Historical striving for self-	X	X	X	X	X

knowledge					
History as the consciousness of freedom		X	X	X	X
Critique of Kant's morality	X	X	X		
Morality embedded in social practices	X	X	X		
Against Liberal conception of freedom		X	X	X	
Alleged Advocacy of Prussian State	X	X	X	X	X

6. *St. Thomas Aquinas*

With respect to the leading philosophic spokesperson of the Roman Catholic Church, a consensus was reached on eighteen issues amongst the chosen authorities.⁷ Wikipedia touched on only eight of these, among the worst percentages (39%) found in my study (“WK: Thomas Aquinas,” 2007). Whereas the numbers on Hegel overestimated Wikipedia’s quality, the numbers here with Aquinas make its performance worse than it seems, though it remains mixed at best.

Covered in the biography section is the fact that Aquinas was born in the Kingdom of Naples at the castle of Roccasecca *circa* 1224–1225. That he studied at the abbey of Monte Cassino and was a student at the University of Naples is also indicated. His entry into the Dominican order, association with Albert the Great, his study and teaching activities in Cologne and Paris, and his involvement in the controversies surrounding the compatibility of Aristotle and Christianity are noted as well. Wikipedia also registers correctly the year that Aquinas died, 1274. As is the case with most of the other thinkers examined, Wikipedia provides significantly more biographical details than the expert consensus deemed necessary. To mention just a few examples, the online reference tool describes the enormous output of writing that Aquinas produced,

⁷ For Aquinas, these authorities were: Copleston (1962c, pp. 20–155); Russell (1961, pp. 444–454); Broadie (1995); and Brown (1999).

how his brothers kidnapped him in an attempt to derail his entry into the Dominican order, along with the ecstatic experience in which he claimed to have seen something so grand that it made every word he wrote seem paltry. One cannot fault Wikipedia for including these points, but it is not so easy to forgive its observation that “Aquinas was dark complexioned, with a large head and receding hairline” (ibid.).

Among Aquinas’ greatest achievements is the synthesis he forged between Aristotle and Christianity at a time when the Greek philosopher’s writings were rediscovered in the West, seemingly contradicting key Christian doctrines to the extent that reason came to appear opposed to faith. While Wikipedia only very briefly refers to the Aristotelian element in Aquinas, it does elaborate on the related issue of reason versus faith. As the commentators examined agree, Aquinas taught that reason and faith are both legitimate modes of accessing the truth. Utilizing the data of sense-experience, reason is capable of grasping important Christian beliefs, such as the existence of God. Meanwhile, faith may correspond with what reason ascertains, and indeed can go beyond it in illuminating such matters as the Trinity and the divinity of Jesus, yet never does contradict it. Hence, there is no inherent tension between reason and faith. Wikipedia outlines all this, though strangely using the terms “special revelation” and “natural revelation,” respectively, to specify faith and reason. Though it rightly points out that Aquinas rejects *a priori* strategies to prove God, his efforts to invoke reason in this task are merely alluded to as the five ways, with no attempt made to summarize each of those five. As a result, the person who depends on Wikipedia for their understanding of Aquinas would come away without learning about his contention that the fact of motion points to a first mover—similarly, with the argument that the causal dependence of objects necessitates a first cause, that the contingency of things presupposes a being whose existence is necessary, rather than accidental. Going by Wikipedia would also leave one not knowing of Aquinas’ insistence that the different degrees of perfection we find in the world imply a standard of ultimate perfection or that the purpose that nature displays even in animate objects suggests a supremely intelligent designer. In sharp contrast to the lack of elaboration about the proofs of God, Wikipedia delineates the various qualities attributed to God by Aquinas through the *via negativa*, trying to understand God on the basis of what He is not, providing the sort of detail that only two of the experts provided. Even so, Wikipedia neglects to say anything about God’s status as creator.

It is mute, too, about Aquinas’ psychology as well as on the particulars of his epistemological theory. Emulating Aristotle, Aquinas envisaged a human being as a unity of form and matter, the latter made up of the body, and the

former consisting of the soul, the principle of life. As the expert consensus attests, Aquinas saw the soul as embodying a passive and active intellect. The function of the active intellect is to abstract the universal elements amongst individual phenomena, while the passive intellect receives the concepts impressed upon it by its active counterpart. This assumes that universals objectively exist within the objects we experience, exactly as Aristotle thought. It also supposes that knowledge is pictured in the traditional manner as a matter of the mind coming into contact with, and assimilating itself to, the objective realm. Not a single one of these points is touched upon in Wikipedia.

It does a better job of mapping Aquinas' ethical theory. Though surpassing the consensus in discussing the Catholic thinker's catalogue of virtues, it echoes that consensus by referring to a universal code of conduct discoverable by reason, and reflected in divine law, to which all humanly constructed laws must conform if they are truly to be considered law. This last part of Thomist natural law theory is not adequately set out in Wikipedia, where instead we discover Aquinas compared to Peter Singer on the question of animal rights. A crucial element of Aquinas' Aristotelianism is his emphasis on happiness as the goal of human life, and therewith the standard by which morality is to be understood. The position of Aquinas is that happiness is ultimately to be found in God through the beatific vision in the next life. On these issues, contained within the expert consensus, Wikipedia's coverage is adequate.

Table 6: Notable Themes in Thomas Aquinas—Expert Summaries vs. Wikipedia

Theme	Columbia	Copleston	Oxford	Russell	Wikipedia
Biography	X	X	X	X	X
Making Aristotle safe for Christianity	X	X	X	X	X
Reason vs. Revelation	X	X	X	X	X
God not provable a priori	X	X	X	X	X
Proof of God from motion	X	X	X	X	

Proof of God from Efficient Causes	X	X	X	X	
Proof of God from Contingency	X	X	X	X	
Proof of God from Gradation	X	X	X	X	
Proof of God from Teleology	X	X	X	X	
Nature of God		X	X	X	X
God as Creator of things	X	X	X	X	
Soul vs. body		X	X	X	
Passive vs. Active Intellect	X	X	X		
Universals	X	X		X	
Knowledge is assimilation of things known	X	X	X	X	
Happiness is the human telos		X	X	X	X
True fulfillment is God		X	X	X	X
Natural/Divine Law		X	X	X	X

7. *John Locke*

The agreed facts⁸ about Locke's life are these: he lived between 1632 and 1704, was educated at Westminster School and Christ Church at Oxford, where he

⁸ Regarding the sources for Locke, see Copleston (1964a, pp. 76–152); Russell (1961, pp. 584–616); Woolhouse (1995); and Rogers (1999).

grew to hate the scholastic curriculum taught there; he devoted part of his career to medicine and did service for Ashley Cooper, the Earl of Shaftesbury. When the Earl fell from political grace in 1683, Locke went into exile in Holland, returning to England after the Glorious Revolution of 1688. After that, he spent much of his time in private study and published his most important works, *The Two Treatises of Government* and the *Essay Concerning Human Understanding*. *Two Treatises* is a statement of his political philosophy and the *Essay* an epistemological work advancing an empiricist outlook. Wikipedia covers every one of these events in Locke's life ("WK: John Locke," 2007). Fitting the pattern thus far of furnishing extensive biographic information, the online encyclopedia illuminates some interesting aspects of Locke's life, including his relationship to leading scientists of the day such as Robert Boyle, Thomas Sydenham, and Isaac Newton, in addition to his Puritan family background, involvement in the slave trade, and role in framing the Fundamental Constitution of the Carolinas. On the other hand, one might justly wonder whether the information that Locke was baptized on the same day he was born, or that his birth took place in a small thatch cottage by a church, properly belongs in an encyclopedia.

All the commentators surveyed mentioned Locke's attack on Robert Filmer's theory that political authority is legitimately restricted to monarchs and ultimately derives from God's bestowal of power on Adam, which has since been transferred to political rulers via inheritance. All the commentators, as well, provide details about Locke's critique of Filmer, noting, for example, that it is practically impossible to determine that Adam's line extends to established monarchs. By contrast, Wikipedia merely states that Locke challenged Filmer without outlining any details about the rebuttal he advanced. Rather than grounding the state's authority on heredity, Locke maintained that government emerges out of a "state of nature" in which individuals are free and equal. Here, they do not have license to do whatever they can get away with, but are accountable to the law of nature, an objective set of rules valid in all times and places, forbidding individuals from violating the rights of others to life, liberty, and property. Since no government exists in the state of nature to enforce the laws of nature, several inconveniences arise, chief among them the fact that individuals are authorized to enforce the laws themselves whenever they are violated, allowing self-interest and passion to bias the punishments meted out. To escape these inconveniences, Locke argues that human beings enter into a social contract, thereby solely authorizing the government to enforce the laws of nature and defend people's rights. As such, the authority of government is predicated on consent. Should the government fail to protect individual rights and abuse its authority, Locke says that people would have the

right to rebel against the reigning authorities for not satisfying their part of the bargain in the social contract. As is the case with Filmer, Wikipedia merely indicates the presence in Locke of the state of nature, social contract, the consensual basis of political legitimacy, individual rights, and the right of rebellion. Unlike the expert summaries, very little is done in the way of elaboration. Nor is there any mention of the law of nature. When Wikipedia does attempt to flesh out Locke's thinking, in explaining what he thought about human nature as manifest in the state of nature, it runs into the contradiction of saying that he conceived of people as "rational and tolerant" and yet "selfish and lustful."

The economic aspects of Locke's political philosophy are much better adumbrated. The right to property is competently stated, as is its foundation in the right to the fruit of one's labour. Regarding the issue whether property rights imply an entitlement to unlimited accumulation of wealth, Wikipedia offers an extended description of how Locke holds that any restrictions on that score, owing to spoilage and waste, are transcended with the invention of money, something to which only one of my authors vaguely alluded (Rogers, 1999, p. 389). Indeed, Wikipedia gives prominence to Locke's discussion of technical topics in economics, such as his views on supply and demand, value theory, prices, rent, capital, credit, monetary policy, trade, and foreign exchange. Since Locke made early contributions to economics, one cannot fault Wikipedia for this.

What can most certainly be faulted is the stunning absence of any consideration of Locke's epistemological teachings. The closest Wikipedia comes to this is the introductory assertion that Locke "has often been classified as a British empiricist." But this does not suffice, insofar as the expert consensus demands that the following ought to have been addressed: that Locke rejected the notion that the human mind enters the world pre-fitted with a set of innate ideas, instead envisioning the mind as a blank slate that is only filled with ideas via experience; that all our ideas either come from the senses or from reflection on our own mental operations; that some of our ideas, like that of the colour blue, are simple in being irreducible into any further components, while many ideas are complex, like that of a city, in being made up of a number of simple ideas; that knowledge is not sense-perception, but rather involves the mind's capacity to discover agreement and disagreement amongst our ideas.

It should be noted, too, that Wikipedia omits any discussion of Locke's nominalism, to wit, the claim that universal concepts like beauty and flatness only exist as mental constructs, as opposed to being manifest in the world itself, as Aristotle and Aquinas believed, and that we use language to conceptually

carve up the world to meet our needs and interests. Further gaps include the lack of any allusion in Wikipedia to Locke's view that the empirical sciences at best impart probability and that rational persons adjust their beliefs to the available degree of evidence. There is nothing, either, about Locke's belief in an external world, even though this would seem to be precluded by the premise that the mind is only conversant with its own ideas.

Accordingly, Wikipedia's entry on Locke has the lowest coverage rating of all seven philosophers analyzed, as Table 7 depicts. I counted 20 themes in the expert consensus. Wikipedia only touched upon 6 or 30%.

Table 7: Notable Themes in John Locke—Expert Summaries vs. Wikipedia

Theme	Columbia	Copleston	Oxford	Russell	Wikipedia
Biography	X	X	X	X	X
No Innate Ideas	X	X	X	X	
All Ideas derived from Experience	X	X	X	X	
Ideas of Sensation & Reflection	X	X		X	
Simple vs. Complex Ideas	X	X	X	X	
Knowledge about relations between ideas	X	X	X	X	
Nominalism	X	X	X	X	
Natural science merely probable	X	X	X		
Primary vs. Secondary Qualities	X	X		X	

Belief in External World		X	X	X	
Belief must be proportioned to evidence	X	X	X	X	
Personal Identity	X	X	X		
Morality demonstrable	X	X	X	X	
Critique of Filmer	X	X	X	X	X
State of Nature		X	X	X	X
Law of Nature	X	X		X	
Government based on consent	X	X	X	X	X
Right to Property	X	X		X	X
Right of Rebellion	X	X	X	X	X
Separation of Powers	X	X		X	

IV. Summary and Conclusion

Table 8 displays an overall numerical summary of Wikipedia's performance. On average, the online encyclopedia captured 51% of the expert consensus surrounding the seven philosophers examined; the median rate of coverage was 56%. Except for two of the philosophers, the range was fairly tight and evenly distributed, suggesting that the results were not sensitive to any undue bias in the organization of themes or the selection of authorities. In the two outlier instances, Aquinas and Locke, the low scores were owing to obvious deficits, the absence of elaboration on the five ways of proving God in the first case, and the silence about epistemological issues in the second. From a purely quantitative view, the picture is definitely mixed.

Table 8: Wikipedia Overall Performance vs. Expert Consensus

Philosopher	Wikipedia Coverage Rate
Aristotle	50%
Plato	65%
Kant	61%
Descartes	56%
Hegel	60%
Aquinas	39%
Locke	30%
Average	51.6%
Median	56%

This was generally corroborated in my qualitative analysis. Only the biography components of Wikipedia's articles were strong—and these arguably too strong. In almost every entry, the proportion of words allocated to the philosopher's life was always larger than among the authors consulted. This could reflect the fact that contributors to Wikipedia's philosophy pages have less experience and confidence grappling with philosophical analysis. It may be that, compared to academic philosophers, Wikipedians on average find it less pleasurable to engage philosophic arguments and prefer to focus on the characters and histories of famous personages. No doubt, too, biography involves factual matters that raise fewer disputes than the interpretation of philosophy. A tendency, too, could be espied towards the documentation of quirky facts, as we saw, for example, with the history of Kant's tomb and the relative location of the cottage in which Locke was born. All this meant that the most important aspect of each philosopher, that which precisely renders them famous and entitled to having their biographic details recorded for posterity—that is to say, what they thought and why they thought it—receives too little treatment.

Nonetheless, I was unable to uncover any outright errors. The sins of Wikipedia are more of omission than commission. Nor did I identify a systematic under-representation of any one of the sub-disciplines of philosophy, including metaphysics, logic, epistemology, morality, political theory.

Considering that the seven articles were authored by a multitude of individuals, none of whose contributions were conditional on being certified as experts, all of them operating within a very lightly regulated framework—that this seemingly chaotic process ended up capturing just over half of the essential points is something of an astonishing feat. If my study fails conclusively to establish the knowledge generating potential of new participatory media like Wikipedia to harness market forces in the arena of ideas, its achievements thus far cannot be entirely dismissed. Nevertheless, based at least on the material I studied, Plato's model of an intellectual elite remains well-ensconced.

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