The Value Problem in Allen’s Non-Adaptive Understanding of Knowledge

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Abstract
In this paper I argue that Barry Allen’s non-adaptive theory of knowledge as introduced in Knowledge and Civilization fails to assign a proper value to knowledge. In defending this view, I first briefly spell out Allen’s evolutionary standpoint by contrasting it with classical pragmatism’s adaptive perspective and then contend that his view is ultimately unable to offer a practical reason for the preferability of knowledge from the standpoint of actual cognitive agents.

Keywords: knowledge, Barry Allen, evolution, value, adaptivity

In his unorthodox and remarkable book Knowledge and Civilization, Barry Allen introduces an account of human knowledge largely informed by evolutionary considerations. His account not only opposes the orthodox understanding of epistemology which defines knowledge as belief-plus and examines it by way of referring to truth values of propositions, but also objects to the pragmatist view which evaluates knowledge by paying due attention to our actions and interests, hence proposing, as Richard Rorty says, a new game [1, p.vii]. Allen sees knowledge not as an evolutionary necessity but a human artifact, a performative act that has emerged in the form of an evolutionary spandrel. The way he characterizes it, human beings developed knowledge not to serve a vital need; their “choosing” knowledge is not evolutionarily determined but contingent, therefore not adaptive. His refusal of the adaptive character of knowledge not only suggests a controversial account on the origin of knowledge, but also offers significant alterations about its definition, function and value. In this essay I aim to show that Allen’s theory ultimately fails to assign a plausible value to knowledge due to its refusal
of the adaptive character of knowledge. In order to do that, I will firstly examine Allen’s non-adaptive evolutionary understanding of knowledge in contrast with the pragmatist adaptive account. Then I will argue that his account does not assign a proper value to knowledge because it does not replace the notion of adaptive theory that is supposed to explicate or make sense of the value of knowledge with something that matters from the individual’s perspective.

1 Allen’s evolutionary account of knowledge and refusal of adaptivity

To clarify what Allen rejects with his account of knowledge, I will first spell out the evolutionary adaptive-understanding of knowledge by reference to the pragmatist standpoint. “The brain”, Dewey claims, “the last physical organ of thought, is a part of the same practical machinery for bringing about adaptation of the environment to the life requirements of the organism, to which belong legs and eye” [3, p.280]. He maintains that the brain, just like the other organs in our body, evolved to function in a way that helps human beings to survive natural selection, namely to enable human beings to adapt to requirements of the environment they belong in. Therefore, products of brain-function, just like products of stomach-function, must somehow contribute to human beings’ adaptation to their environment, favor them compared to ones lacking such a mechanism. William James also claims that products of brain-function, ideas, can contribute to human adaptation, in other words can be expedient for human species – only if they truly demonstrate the world human beings belong in, that is, if they agree with the experiencable reality [4, p.98]. The main idea here is rather simple. When you observe a friend die because she has eaten a red mushroom and infer the true idea that eating red mushrooms may kill human beings, your brain can be said to have acquired useful information since in the later stages of life you may save your life by avoiding red mushrooms. However, if your brain produces an idea that does not agree with experiencable reality, such as “eating blue mushrooms may kill human beings” (assuming that you do not permanently see color red as blue, that it is a temporary error), then that idea is false, therefore obviously not expedient because if you act as described in the second case, you will unnecessarily avoid a perfectly edible sort of food.

The pragmatist account of evolutionary-adaptive knowledge, therefore, has three key notions: expediency, truth and agreement with reality.
Those three notions not only determine the origin and the structure of knowledge, but also assign a practical value to it. “The practical value of true ideas is thus primarily derived from the practical importance of their objects to us. . . . You can say of it either that ‘it is useful because it is true’ or that ‘it is true because it is useful’”[4, pp.89-90]. Therefore, according to the pragmatist perspective, human beings should seek true ideas, ideas that agree with experiencable reality, because they are expedient for humans’ well-being.

Allen, in his non-adaptive theory of knowledge, resists the idea that any of those three notions can be used to understand what knowledge really is. He characterizes the traditional notion of truth as an onto-logic property that is assigned analytically to evaluate propositions [1, p.27]. Although, he claims, truth may have a practical cash value, it cannot be accepted as a crucial criterion in the determination of knowledge because of two reasons: (1) it is analytical philosophy’s bias to reduce knowledge to propositional and discursive statements [1, pp.14-16], knowledge is a far more extensive concept which include performative acts that cannot be expressed within propositions (e.g., knowing how to dance, knowing a language); (2) there is no residual determination for truth apart from the economy of practice; what we call a true proposition is a proposition that has a greater cash-value than its opposite in practical terms [1, p.77], so knowledge does not have to be true, but we need knowledge to decide on truth-value of propositions, to recognize what passes and what does not. Allen argues that the value of truth can be identified with the quality of moral truthfulness, which is something more than the logical truth of a proposition and speaker’s sincere belief in her statement [1, p.78]. A statement and a speaker can be deemed truthful only if the proposition is irrefutable at a given time. Withstanding refutation is the very quality of truthfulness that determines its cash-value. Therefore, Allen does not characterize truth as a property of knowledge, but an analytical tool to examine discursive statements whose quality can be understood in terms of refutation.

One may claim that even if the traditional truth and falsity are out of picture, the character of knowledge can be examined with respect to its agreement with reality. However, Allen claims

[w]e have no idea which beliefs or conceptions correspond with reality (or are true) apart from how well they hold up. We cannot independently distinguish a correspondence with reality and correlate it with an independently established effectiveness. Con-
sequently, there is no evidence for “correspondence”
except the very qualities of performance it should ex-
plain, which makes so-called explanation empty. [1,
p.84]

Here Allen points to an important circularity: the claim that an idea is
effective because it agrees with reality is circular because we can justify
an idea’s agreement with reality only by showing that it works, by its
practical quality which constitutes the effectiveness of that idea. The
reason we know something is not because it is true or it corresponds
with the reality, but because it has a quality which also constitutes the
mentioned truthfulness and correspondence. Therefore, Allen seems to
defeat the adaptive theory’s second key notion by ruling out the rela-
tionship between knowledge and agreement with the reality.

Allen’s refusal of the third key notion, expediency, constitutes the
core of his non-adaptive theory of knowledge. In the first part of his
book he accuses Dewey of reversing the order of the actual relation-
ship between knowledge and usefulness: “It is an illusion to believe the
usefulness of knowledge explains why it exists. That reverses the true
order. It is knowledge that explains the existence of so many useful
things” [1, p.58]. Dewey’s naturalist perspective, he claims, assumes an
already present artifactual environment that we are adapted to know,
and consequently ignores the artifactual character of knowledge and re-
duces it to a passive biological function. Allen opposes the view that
knowledge is a mere biological function or instinct which is emerged due
to evolutional necessity, and defines it in terms of contingent cultural
inheritance. His claim on contingency of knowledge is based upon the
archeological evidence that there exists more than 50,000 years between
the biological arrival of human species and the first appearance of human
culture as we know it [1, p.188]. At the emergence of human culture,
he claims, human beings’ natural selection and genetic adaptation were
mostly completed; there is no archeological data that indicates a sig-
ificant change in the human way of life right before the emergence of
modern human culture. Therefore, human artifacts and knowledge can-
not be taken to be the results of natural selection but of human choice,
and they are not determined but contingent. Allen is aware that human
beings cannot change their brain structure by choice and program it to
produce knowledge, it is rather that the human brain does involve a po-
tential to produce knowledge and that potential is actualized not out of
necessity but by agency and preference. To clarify the underlying idea
here, Allen appropriates Gould’s concept of “evolutionary spandrels”:
Building with arches gives you spandrels, at least potentially, even though no one builds with arches for the sake of making spandrels. . . . [Evolutionary spandrel] traits are not ad-apted, or selected for what they do, but are recruited, or ex-apted, after the anatomical fact. [1, p.189]

Just like spandrels, humans’ ability to know is not constructed (or evolved) to perform a function, but it has emerged as an evolutionary side-product; human beings contingently choose to perform on it to produce knowledge. He defends the mentioned idea by reference to Darwin’s claim that there is no ground to think that any facial muscle is developed or modified exclusively for performing expressions [1, p.191]. Therefore, by refusing the thesis that knowledge is originated as an evolutionary adaptation Allen explicitly rejects that usefulness determines the character of knowledge.

Up to now, I tried to show that in his non-adaptive theory of knowledge Allen eliminates three key notions of adaptive theory – truth, agreement with the reality and expediency – which are used to determine the value of knowledge. However refusal of those notions does not suggest anything more than pointing out what is not the character of knowledge in Allen’s perspective. But what is knowledge? Allen writes “Knowledge is the accomplishment, at once artistic and technical, of superlative artifactual performance” [1, p.259]. Knowledge is the success that enables reproduction of artifacts and their use from generation to generation, constitutes and maintains culture and civilization, art and science, and has practical, functional and effective consequences. Hence, Allen’s three key notions are “performance”, “artifact” and “accomplishment”. “The tool,” he argues “like the knowledge, is impossible and the rock (or the information) worthless, apart from the performance that brings stone forms and potential information into a wider economy of artifact and knowledge” [1, p.181]. To actually know something does not mean to have information about one’s environment; it requires a performance, a successful performance in the range of artifacts. Consider a person who covers her head with a notebook in the rain. Her act encompasses both (1) the information that a solid and relatively large object can be used to get protected from the rain, and (2) the performance to use an artifact, a notebook, to avoid raindrops. Then we can claim that her performative act indicates knowing that a notebook can be used to avoid the rain. If she is aware of (1) but do not perform according to it, then her information is worthless. If she performs (2) without being cognizant of (1),
then her action is coincidental. In both cases, it is not possible to claim that she has knowledge since neither of those cases indicates a performative accomplishment. Consequently Allen suggests that knowledge has not evolved to contribute to human adaptation but emerged as an evolutionary spandrel, and can be defined as the accomplishment of the superlative artifactual performance.

2 The value problem in Allen’s evolutionary understanding of knowledge

In this part, I will argue that Allen’s non-adaptive definition of knowledge – the accomplishment of superlative artifactual performance – does not assign a value to knowledge through an evaluation of Allen’s account of accomplishment and performative quality. First, however, I want to clarify what I mean by value.

Value of knowledge has obviously been a matter of philosophical interest since Plato’s *Meno*. In famous inquiry, Socrates questions the difference between knowledge and true belief his regard to their values. Both notions seem to within serving the same practical end, hence they have the same value Socrates claims. The common intuition, however, assigns knowledge a greater epistemic value than it does to mere true belief. Roots of this gut feeling have been investigated extensively throughout the literature, mainly by referring to three key concepts: justification, reliability and virtue. According to the externalist approach, what is added to justified belief in order to produce knowledge is an epistemic state or fact which need not be within the cognitive reach of the agent.³ Reliabilist view, on the other hand, provides a slightly different approach. It defines knowledge as reliably produced true belief and deems it more valuable than mere true beliefs because the former tends to conduct truthfulness in a relatively reliable fashion [5, p.50]. Zagzebski, as a virtue theorist, opposes to both externalist and reliabilist arguments by claiming that the method of production (reliable belief formation) does not affect the value of the product (knowledge). Instead, she argues that knowledge is an intellectual virtue and value of knowledge needs to be defined with respect to the value of motivation towards a virtue [7, pp. 201-2]. Greco supports Zagzebski’s emphasis on the motivation of the agent by claiming “It is of prudential importance to the subject herself that she be a reliable agent judge of various truths” [5, p. 83] In this essay, I do not intend to dwell on the deeper issues on the nature of the epistemic value. Rather, for the purposes
of this paper, I wish to claim that whatever the value of knowledge is, it needs to constitute a reason for the agent to prefer knowledge. This reason can vary depending on how one situates herself in the matter of epistemic justification. Yet, if an account promotes human knowledge as incontrovertibly valuable, it needs to provide a clear reason for the cognitive agents to prefer it. Hence, in the rest of this part I will investigate if there is a reason for people to want knowledge as described by Allen.

In *Knowledge and Civilization* Barry Allen argues that the value of knowledge can be understood in terms of its performative quality, its non-accidentally successful performance. In explaining his notion of success, he writes “Who judges the ‘accomplishment’ of knowledge? A short answer is that knowledge is judged by traditions of accomplishment” [1, p.72]. He maintains that knowledge can be regarded as an accomplishment only if it succeeds to satisfy these four customary criteria of performance: (1) appropriateness for usage, users and the setting of use and efficiency, (2) quality of design, (3) fecundity, the capacity to be applied in widely different fields, (4) symbiosis, artifact’s contribution to expansive coherence of a built environment [1, p.72]. It is crucial to remember that Allen establishes these four criteria not with respect to their contribution to individual well-being, or to well-adaptation of human beings to their nature but with respect to their contribution to civilization, to practical improvements of cultivated knowledge. There is an interesting reverse reading here: knowledge does not aim efficiency, nor has it evolved to serve efficiency; rather, what is superlatively efficient can be constructed with/through knowledge, to develop cultivated knowledge and artifactual civilization. At this point, in order to assess whether Allen’s account of knowledge offers a viable reason for individuals to want knowledge, we can ask the following two questions:

1. Does knowledge in Allen’s sense necessarily contribute to individual well-being?

2. Is there any ground other than contribution to human well-being to think that Allen’s non-adaptive knowledge is preferable for individuals?

Let’s start with the former. (1) is actually a question that can be answered by referring to the purported definition of knowledge. Does Allen’s proposed definition of knowledge necessarily contribute to human well-being? I contend that one cannot infer that kind of a necessity, since the mentioned accomplishment is to be understood with respect to traditions and practices of civilization, not to its compatibility with hu-
man needs, desires or virtues. As I mentioned in the first part of the essay, Allen explicitly argues that knowledge (and the artifacts of knowledge, namely civilization) did not evolve to serve a teleological project for human beings. Rather, it emerged contingently although its existence affected the very process of evolution. Then, it is not possible to claim that knowledge always serves for humans’ well-being. However, quite confusingly, Allen argues that the third and the forth dimensions of performative quality, namely fecundity and symbiosis, prevent us from supposing that destructive accomplishments, destructive in the sense that they function against the utility of humanity, can be regarded as knowledge. He claims that although artifacts such as atom bombs and biological weapons can be more efficient than other killing tools and they may have quality of design since they kill human beings in a way that have never been tried, it is not possible to build lastingly with them and also they undermine the form of life that tries to build with them [1, p.74]. This is the moment when Allen gives a normative twist to his account. Up to that point, he does not discuss knowledge as a tool to protect human survival or provide human well-being, but that knowledge de facto evolved through human civilization and can be evaluated by traditional criteria of accomplishment of that civilization. Now, Allen claims that an artifact which may obstruct the continuity of human progress cannot be regarded as a superlative performance. Let me offer an assessment of this idea with respect to a well-known objection to moral utilitarianism. Assume the extremely repulsive but not-necessarily-false argument that if China was destroyed with atom bombs, the worldwide problem of scarcity of resources would be resolved and better lives would be provided for many more people than killed in China. In that case, should we accept atom bombs as a superlative artifactual performance since they do not undermine the form of life that humans build with them but, contrarily, they provide a better environment for further artifactual performance? More importantly, are we (rational agents) to deliberately decide which human artifact contributes to civilization better in the overall? Allen argues, as I mentioned above, that we are not the ones to judge what is an accomplishment or not, only the traditions of culture determine the criteria of accomplishment. Then, it is not possible to accept that atomic bombs are not artifacts of superlative performance in any circumstance, their artifactual quality can be determined in time with respect to their contribution to the civilization – which in the process of its evolution yielded A-bombs as one of its results. What I try to maintain here is that by defining “accomplishment”, and thus
“knowledge”, with respect to traditions of the civilization, Allen’s view gives rise to a significant vagueness about what may pass as knowledge. As far as I can see, Allen’s theory invites us to accept any accomplishment of superlative artifactual performance, regardless of its impact on the lives of particular individuals, to be knowledge as far as it has a place in the rise of civilization. Thus, I think that Allen’s non-adaptive account of knowledge does not necessitate the idea of any contribution to human well-being.

The second question (2) can be evaluated and answered with respect to value of human intelligence and labor. Knowledge, as the accomplishment of superlative artifactual performance, requires collective labor of human mind throughout the history, and, for Allen, it is a success term. Therefore, it must be regarded as something highly valuable and desirable. I have serious doubts that mere labor, quality, or rareness constitute a requirement for preferability or value. I am inclined to think, on the contrary, that employing those notions in a debate on value may drag one into an insidious circle of normativity. Kvanvig’s argument on this subject matter is quite illuminating: “Normativity is usually thought to be a supervenient property, by which we mean that the presence of non-normative factor implies the presence of normative ones but not vice versa. So any normativity found in knowledge must have its basis in non-normative factors” [5, p.50]. Reckoning an entity to be valuable due to its rareness or the labor it requires without providing any non-normative reason for valuing rareness or labor is tantamount to reducing value to some kind of fetish and ignoring its practical character. Consequently, I do not believe that knowledge, as it is characterized by Allen, is preferable by people because of its rare and qualified character.

One may wonder at this point what the bite of my argument is. It may be the case that Allen’s definition of knowledge, as a whole, does not necessitate or constitute a value for individuals; yet, it is clear that most accomplishments qua knowledge, as Allen defines it, contribute to human well-being. I do not object to the idea that great human artifacts, such as ships, modern medicine and bridges contributed to human well-being and also can be regarded as knowledge in Allen’s account. My concern in this context is that Allen’s non-adaptive understanding of knowledge seems to be formulated with respect to the huge framework of civilization and ignores or underestimates the motivation of individuals to participate or contribute to the process of the generation of civilization. This indifference towards individual preferences causes two inconsistencies in Allen’s theory. First, although he claims to assign a value to knowl-
edge, performative quality, his formulation of performative quality does not, as I have discussed above, provide a reason for potential knowers to prefer knowledge, thus it does not seem to be an admissible account of value. Second, in the last chapter of the book, he expresses his worries about user-friendly devices which castrate qualified knowledge and the advancement of civilization. He writes “What do we really produce by more efficiently doing easy things anybody can do? . . . It may generate money, but not prosperity; if someone loses it, he or she loses only money – the wealth, the prosperity, he or she never had” [1, p.270]. Again, the significance of his argument perishes due to the vague description of the notions of wealth and prosperity. If “wealth” and “prosperity” are to be more preferable than mere efficiency according to Allen, he needs to demonstrate an actual reason, which can be adopted by individuals, that justifies the mentioned preference. Strictly speaking, I do not think that Allen’s theory of knowledge is a tenable account of value, and it seems to fail to provide justifiable reasons for people to give up their smartphones and work for “qualified knowledge”. Defining knowledge as the accomplishment of superlative artifactual performance does not promise a practical telos that can or must be used at the level of actual individuals. By contrast, the adaptive theory just does that. By defining knowledge as expedient ideas that agree with reality, adaptive theory suggests a reason for individual motivation to knowledge, and also for necessity of improvement of civilization, i.e., expediency. Allen’s theory does not replace the adaptive theory’s expedient character of knowledge with something that can motivate individuals to want the accomplishment of the superlative artifactual performance. Knowledge in his sense can be expedient for individuals or not, contribute to their well-being or not. The actual criterion for knowledge is not designed with respect to individuals, but with respect to traditions of civilization, which is constituted non-adaptively by an evolutionary spandrel. Consequently my account here can be regarded as an attempt to show that there is no strong ground for thinking that knowledge, as defined by Allen, is preferable for human beings at the level of the individual.

3 A possible Allenian response concerning normativity

Allen may respond to my objection by adopting a prescriptive standpoint about the notion of value. In other words, he may maintain that human preferences are and should be determined not according to particular contributions to one’s well-being, but from a standpoint of humanity
or universality. He writes in his more recent book *Artifice and Design* that “[a]rtifice is more than adaptive behavior; it is *performance*, which implies normative accomplishment rather than an instinctive, species-specific behavior and its adaptive effects, like a beaver dam” [2, p.49]. The statement reveals not only that he maintains the account he introduces in *Knowledge and Civilization*, but also the normative character of accomplishment in Allen’s theory. Thus, he may reject the objection raised in this essay by claiming that in his theory, value of the accomplishment cannot be measured via reason for preferability but with respect to a normative account that aims at the improvement of human civilization. If that is the case, first he needs to outline how he (or anyone) determines the criteria for improvement of human civilization. Even if he successfully deals with this extremely challenging task, the question of how people adopt the mentioned criteria still remains unanswered. A normative argument on human beings’ motivations for action is not only difficult to justify philosophically, but also hardly compatible with Allen’s overall methodology. As I mentioned previously, Allen’s theory constitutes a historical analysis regarding knowledge with an evolutionary touch. Since he rejects adaptive claims on the origin of knowledge not through some conceptual examination but by relying on archeological and historical evidence, the line of thought he follows is factual and descriptive rather than normative or prescriptive. However when it comes to assigning value he seems eager to construct normative judgments without relying on tenable non-normative factors. For this reason, I do maintain that the value problem in Allen’s *Knowledge and Civilization* generates a significant explanatory hole in his theory and definitely calls for further study on this matter.4

**Notes**

1 “Experiencable reality” here chiefly means the world open to human perception, conception, activity, etc. To distinguish pragmatist reality from metaphysical and relativist reality Dewey argues: “No capacity to make adjustments means no intelligence; conduct evincing management of complex and novel conditions means a high degree of reason. Such conditions at least suggest that a reality-to-be-known, a reality which is the appropriate subject-matter of knowledge is reality-of-use-and-in use, direct or indirect, and that reality which is not in any sort of use, or bearing upon use, may go hang, so far as knowledge is concerned” [3, p.278].

2 Allen’s discussion on the claim that environments are made not found can be seen in page 180. Although it is not a topic I want to discuss in this essay, let me mention that Allen’s criticism to Dewey is controversial, since Dewey strongly
emphasizes that human beings and their environment unceasingly affect and alter one another; hence, the very consequences of the process of knowledge must be grasped within the boundaries of nature, not as a distinct mechanism [3, pp.281-282]. Therefore, Dewey’s claim that knowledge is adaptive does not necessarily disregard the fact that knowledge can affect the environment to which it adapts.

3 I borrow the categorization “externalist” from Swinburne which he described as “An externalist theory claims that warrant [which turns a true belief into knowledge] arises solely from something external to the subject to which she may have no access”[6, p.63].

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