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**DIALOGUES IN ARTS AND SCIENCE**

# **JUSTIFYING INDUCTION AND ALTRUISM**

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Most of our beliefs concern how things are, have been, or will be at times and places. Most of our desires concern how things will be for persons or other sentient beings. (In both instances, “how things are” is intended broadly, so as encompass any kind of state of affairs, including the occurrence of any kind of event or the continuation of any kind of state or relation.) These things are so even though some beliefs (about mathematics or God, for example) might not concern spatio-temporal locations at all, and some desires (about mathematics or nature, for example) might not concern persons or sentient beings at all.

Often, other things being equal, we expect how things are at unobserved times and places to resemble in at least many respects how things are or were at times and places that are or were observed: in effect, we extend — one might also say “project” — what we believe about observed spatio-temporal locations to other spatio-temporal locations as well. For example, from a belief that touching the hot stove in your kitchen is painful now and has been painful in the past, you may come to believe that touching the hot stove in your kitchen will be painful tomorrow, or that touching a hot stove will be painful always and anywhere. Often, other things being equal, we want how things are for others to resemble in at least many respects how we want things to be for ourselves: in effect, we

extend — one might also say “project” — what we desire for ourselves to other persons as well. For example, from a desire that your hands not be subjected to painful burns, you may also come to desire that another person’s hands not be subjected to painful burns, or that everyone’s hands not be subjected to painful burns. “Induction” (or “inductive reasoning”), as I will use the term, is the process of generating and sustaining beliefs by extending to some or all other locations what one already believes about previously or currently observed locations. “Altruism” (or “altruistic reasoning”), as I will use the term, is the process of generating and sustaining desires by extending to some or all other persons or sentient beings what one already desires for oneself. Beliefs and desires are typically not under immediate voluntary control, but together they are central determinants of our intentional actions, and we often cite them to explain those actions. It is largely because of this causal and explanatory connection to action that beliefs and desires are of such great significance.<sup>1</sup>

Not every instance of generating a belief from one or more previous beliefs is an instance of induction. Suppose, for example, that you believe that you have a dollar and believe that anyone who has a dollar would have enough money to buy a candy bar from the vending machine; and suppose that you conclude from this that you have enough money to buy a candy bar from the vending machine. In doing so, you generate a new belief from previous beliefs; but there is no extension from beliefs about observed locations to similar beliefs about other locations, so the process is not induction. In this case, the process

is instead “deduction” or “deductive reasoning” (sometimes also called “demonstrative reasoning”). Other processes that are neither induction nor deduction can generate beliefs as well — for example, wishful thinking may generate the belief that one will win a lottery in the near future, independent of previous beliefs or any consideration of evidence. Similarly, not every instance of generating a desire from one or more previous desires is an instance of altruism. Suppose, for example, that you desire to obtain a candy bar, desire not to steal, and believe that you can most effectively obtain a candy bar without stealing by putting a dollar in the vending machine; and suppose that you thereby come to desire to put a dollar in the vending machine. In doing so, you generate a new desire from previous desires; but there is no extension from a desire concerning yourself to a similar desire concerning others, so the process is not altruism. In this case, the process is instead “means-ends deliberation” (also often also called “instrumental reasoning”). Other processes that are neither altruism nor means-ends deliberation can generate desires as well — for example, intolerance may generate the desire that others follow practices exactly like one’s own, independent of previous desires or any consideration of consequences for anyone.

It is evident that science — both in the broader sense of the systematic endeavor to know what is true and in the narrower sense of specific research practices and institutions — requires far more than simple induction alone. Nevertheless, it seems equally evident that induction plays a crucial role in determining what we believe about the world, including the laws governing

it; that it is one essential component or aspect of science in both the broader and narrower senses; and that most of science in either sense would be impossible without it. It is also evident that ethics — both in the broader sense of the systematic endeavor to do what is best, and in the narrower sense of specific moral practices and institutions — demands far more than simple altruism alone. Nevertheless, it seems equally evident that altruism plays a crucial role in determining what we desire about the world, including the practical principles we seek to follow; that it is one essential component or aspect of ethics in both the broader and the narrower senses; and that most of ethics in either sense would be impossible without it.

At least three different questions may be asked about either induction or altruism, so understood. The first is a methodological question: What roles does the process play in the central endeavor (science or ethics, respectively) to which it is evidently crucial? The second is a psychological question: What specific mechanisms underlie the process (induction or altruism, respectively) in human beings? The third is a normative question: How, if at all, is the use of the process justified? The first two questions, as applied to either process, are undeniably important; in this essay, however, I will discuss only the third, justificatory question. I will not try to answer that question, for either process, but only to argue, first, that the question of justification, too, is a serious and worthwhile question for both induction and altruism; and, second, that there is likely to be value in investigating the justification of induction and the justification of altruism together — which is something that has not been done before.

### ***1. The Questions of Justification***

Should people expect (at-least-currently) unobserved cases to be like the already-observed cases; and if so, what is the justification for doing so? Should people also want for others what they want for themselves; and if so, what is the justification for doing so? To many, these rather general and philosophical questions will have an initial air of unreality or, at least, of lack of urgency. Admittedly, the processes of induction and altruism — whatever their underlying mechanisms may be — are deeply embedded in human nature and not under direct voluntary control, so the effort to answer these questions of justification may not make a dramatic difference to most of one's everyday beliefs or desires, or (accordingly) to most of one's everyday actions. Certainly, the need to answer these questions of justification is less immediate than, say, a juror's need to answer the question of the guilt of a particular defendant or the judge's need to determine what sentence to impose on the defendant if convicted. Yet the juror cannot reach any belief about guilt or innocence without relying on a large body of standing beliefs, many of them formed inductively; nor can the judge reach any intention about sentencing without relying on a large body of standing desires about the application of law and the welfare of society, many of them formed altruistically. Moreover, our propensities to self-examination and self-evaluation are themselves also deeply embedding in human nature, and they are not under direct voluntary control, either. When once we do begin to reflect on the basis of our beliefs or our desires, it can become increasingly

difficult to remain entirely satisfied about retaining and utilizing our standing bodies of belief or desire — even if we largely cannot abandon them, either — unless we can give ourselves some kind of satisfying answer to the broader normative question about induction or altruism, respectively.

In addition, once the normative question has been raised about these processes, additional considerations can make the question seem more real and even a bit more urgent. For one thing, it seems that we are not always right to expect that unobserved cases will be like observed cases, nor in desiring for others what we desire for ourselves. We have never observed our own deaths at any time in the past, for example, but we should not for that reason believe that we will never die in the future. Similarly, we desire that we should regularly spend time with our own loved ones, but we should not for that reason desire that everyone in the world regularly spend time with our own loved ones. But if induction and altruism can admittedly be applied incorrectly in some cases, we might wonder, what is the underlying difference between better and worse uses of them? It might well prove useful, in determining or understanding which applications of induction or altruism to prefer or endorse, to know what justification there is for using these processes at all.

Furthermore, as compelling as induction and altruism may naturally seem when considered in isolation, each also can seem to suffer by comparison with other generators of belief and desire, respectively. Induction often seems less compelling than direct observation as a method of generating and

sustaining belief; and it also seems less compelling than deduction, which is (by definition) incapable of leading from a set of true premises to a false conclusion. Similarly, altruism often seems less compelling than consulting one's own immediate inclinations as a method of generating and sustaining desire; and it also seems less compelling than means-end deliberation, in which the value of an end is guaranteed to convey at least some value to the means.

Finally, although induction and altruism may each appear at first sight to admit of an easy and obvious justification, in each case this seemingly obvious justification turns out, surprisingly enough, to be subject to a simple yet seemingly devastating objection. To see this, consider first the case of induction. It is not, after all, as though we have no experience with induction; on the contrary, we have often generated beliefs inductively in the past. Many of these inductively generated beliefs concerned spatio-temporal locations that had not yet been observed at the time of belief-generation, but which were observed subsequently. Of these inductively generated beliefs, some subsequently proved to be false (for example, that all swans are white), but most of them (for example, that the sun would come up this morning) have proven to be true. Moreover, we can see that many other merely potential inductive beliefs—that is, possible beliefs that could have been generated inductively from actual observations, but happened not to be — would also have been true. Hence, it is natural to argue that our experience with induction shows it to be “reliable,” in the sense of at least usually producing true beliefs. Because true beliefs are preferable



to false ones, the reliability of a belief-generating process provides an obvious justification for generating and sustaining beliefs by means of it, and it provides justification for the beliefs so generated as well. Thus, it is natural to find a justification for induction in the following argument:

**Premise:** In observed cases, induction has been reliable.

**Conclusion:** Induction is reliable.

One might express this proposed justification in a slogan: “Use induction, for it has worked so well.”

As the 18<sup>th</sup>-century Scottish philosopher David Hume is widely recognized to be the first to have observed, however, this argument for the reliability of induction commits the logical fallacy of begging the question.<sup>2</sup> For present purposes, we may say that an argument “begs the question” when the intended audience cannot accept the conclusion on the basis of the argument because its doing so would already require accepting, as a presupposition, the very conclusion at issue. Some arguments beg the question because the intended audience could find no reason to accept one or more of the *premises* unless it already accepted the conclusion. Other arguments, however, beg the question because the intended audience could find no reason to infer the conclusion *from* the premises unless it already accepted the conclusion. The argument for the reliability of induction now under consideration does not beg the question in the first way just mentioned: the argument has only one premise, and one need not

already have accepted the conclusion (that induction is reliable) in order to accept the more limited premise (that induction has been reliable in observed cases). The argument does beg the question in the second way, however, for it seems that one would find no reason to *infer* that conclusion *from* that premise unless one *already accepted that induction is reliable*. This is because the argument is itself what we may call an “inductive argument” — that is, an argument that uses premises concerning what has happened in observed cases to support a conclusion that something similar will happen in one or more unobserved cases as well. In the particular argument at hand, a premise concerning the reliability of induction in observed cases is used to support a conclusion that induction will be reliable overall, including unobserved cases. Yet it seems that one can find no reason to *accept* inductive arguments unless one presupposes that induction *is* a reliable process overall, including unobserved cases — and this presupposition is just what the conclusion of the present argument asserts and hence what the argument aims to establish to its audience. For this reason, anyone who began with doubts about the truth of that conclusion would presumably also have doubts about the acceptability of the argument — and of all arguments like it. Skeptics about induction would question precisely why induction’s admitted past success should be taken as evidence of its present or future success. The skeptic’s slogan might be: “That was then; but this is now.”

We say that a belief is “true” if *the way it represents things as being* — typically at a spatio-temporal location — is a *fact*. Similarly, we may also say that a

desire is “fitting” if *the way it aims at things being* — typically for a sentient being — would be *good*. Just as a belief-generating process may be called “reliable” if it usually produces beliefs that are true (representing facts) rather than false, so a desire-generating process may be called “value-tracking” if it usually produces desires that are fitting (aiming at good ways for things to be) rather than unfitting.

With this terminology in place, we may now consider the seemingly obvious justification for altruism. It is not, after all, as though we have no experience with altruism; on the contrary, everyone has considerable experience with the altruistically generated desires of other persons (typically beginning with their own parents) extended towards themselves. Of the altruistically generated desires that one finds to be extended towards oneself, some of them will prove to be unfitting (for example, the desire of a durian-lover that one should taste a durian, the taste of which one finds repugnant), but surely most of them (for example, that one be happy or free from suffering) will be fitting. Moreover, one can appreciate that many other merely potential altruistic desires extended towards oneself — that is, possible desires that could have been generated towards oneself altruistically by others from their actual desires, but happened not to be — would also have been fitting. Hence, it is natural to argue that one’s experience with altruism shows it to be value-tracking, in the sense of at least usually producing desires that are fitting. Because desires that are fitting (that is, desires for states of affairs that would indeed be good) are preferable to desires that are unfitting (that is, desires for states of affairs that would not be

good), the value-tracking character of a desire- generating process provides an obvious justification for generating and sustaining desires by means of it, and it provides justification as well for the desires so generated. Thus, it is natural to find a justification for altruism in the following argument:

**Premise:** When extended towards oneself, altruism is value-tracking.

**Conclusion:** Altruism is value-tracking.

One might express this proposed justification in a slogan: “Extend your concern to others, because you would have others to extend their concern to you.”

Like the argument for the reliability of induction just considered, however, this argument for the value-tracking character of altruism begs the question, and it does so in a similar way. The argument does not beg the question in the first of the two ways described earlier. It has only one premise, and one need not accept the conclusion (that altruism is value-tracking in general) in order to accept the weaker premise (that altruism extended towards oneself is value-tracking). Like its inductive counterpart, however, it does beg the question in the second way, for one will find no reason to infer the conclusion from the premise unless one *already accepts that altruism is value-tracking*. This is because the argument is itself what we may call an “altruistic argument” — that is, an argument that uses premises about the goodness of things being a certain way for *oneself* in order to support a conclusion about the goodness of things being a similar way for *others as well*. In the particular argument at hand, a premise concerning the

value-tracking character of altruism—that is, its tendency to produce desires for states of affairs that would be good — when extended towards *oneself* is used to support a conclusion that altruism will be value-tracking overall as well, including as applied to how things would be for others. Yet it seems that one can find no reason to *accept* altruistic arguments unless one presupposes that altruism is a value-tracking process — and this presupposition is just what the conclusion of the present argument asserts and hence what the argument aims to establish to its audience. For this reason, anyone who began with doubts about the truth of that conclusion would presumably also have doubts about the acceptability of the argument — and of all arguments like it. A skeptic about altruism, such as a philosophical egoist, will question precisely why altruism’s success at producing in others desires about the skeptic himself or herself that are admittedly fitting (for example, that he or she should be happy or free from suffering, which would be good) provides any reason to think that the desires it produces about other sentient beings are fitting (for example, that those others should be happy or free from suffering). The skeptic’s slogan might be: “I am myself; but they are just them.”<sup>3</sup>

One might seek to salvage something from these seemingly obvious justifications by deriving from them a conclusion weaker than the conclusion that induction is reliable or that altruism *is* value-tracking. For example, the very existence of the first argument shows at least that *if* induction is reliable, *then* there is an argument based on a reliable process for the conclusion that

induction is reliable. Similarly, the very existence of the second argument shows that *if* altruism is value-tracking, *then* there is an argument based on a value-tracking process for the conclusion that altruism is value-tracking. However, these merely conditional conclusions seem too weak to constitute by themselves a substantial justification for the processes of induction and altruism in the absence of any substantial justification for thinking that the specified condition is satisfied — that is, that induction is reliable or that altruism is value-tracking.

A slightly different conclusion that can be drawn from the existence of the seemingly obvious arguments is that both induction and altruism are “self-supporting,” in the sense that an inductive argument operating on recognizably admissible premises declares induction itself to be reliable, and an altruistic argument operating on recognizably admissible premises declares altruism itself to be value-tracking. Arguably, this kind of self-support should at least be worth *something*. Suppose, for example, that a witness is called to testify and is asked, “Are you a trustworthy witness?” To cite an affirmative answer as evidence of the witness’s trustworthiness no doubt begs the question; but at least it is better for the witness’s credibility than a negative answer to the same question would have been. Similarly, other conceivable processes of generating beliefs or desires do *not* consistently approve of themselves — either they are neutral, or they positively disapprove of themselves. For example, employing the process of *giving weight only to arguments for unreliability* will result in a judgment that that process is itself unreliable, and one who employs the process

of *desiring only what one considers to be bad* will judge that very process not to be value-tracking.

Nevertheless, the mere fact of self-support cannot by itself constitute a fully satisfying justification of either induction or altruism, because there are *other* self-supporting processes that yield beliefs or desires incompatible with those generated by induction or altruism, respectively. One well-known example is “counter-induction” (also sometimes called, for obvious reasons, “the Gambler’s Fallacy”), which predicts that how things are at as-yet unobserved times and places will be *unlike* how things are at observed locations. It sanctions the following counter-inductive argument:

**Premise:** In observed cases, counter-induction has been unreliable.

**Conclusion:** In as-yet-unobserved cases, counter-induction will be reliable.

Similarly, let us define “malice” as the process by which desires that things be a certain way for oneself are extended to desires that things *not* be that way for others; and let us define a “malicious argument” as one that uses premises about the goodness of things being a certain way for oneself to support a conclusion that it would be good for things *not* to be that way for others. The following is then a malicious argument supporting the value-tracking character of malice:

**Premise:** Malice extended towards oneself is not value-tracking.

**Conclusion:** Malice extended towards others is value-tracking.

## ***2. Investigating Induction and Altruism Together***

Once raised, then, the parallel question of justification do both seem to call for further investigation of some kind, for although good answers to them would be desirable, such answers are at least initially elusive. Since the time of Hume, the question of the justification of induction has been discussed many times by many philosophers, and many detailed proposals for justifications have been offered and criticized. The question of the justification of altruism has often been discussed as well, at least in effect, but it has typically not been clearly distinguished from closely related questions, such as why one should treat others in action as one would like to be treated oneself, or why one should act in accordance with the dictates of morality understood as imposing a requirement of such treatment. Although the justification of induction and the justification of altruism have not previously been investigated together, there are several reasons why it is desirable to do so.

First, investigating the two questions together is one way of further expanding our understanding two different sets of important relations and valuable parallels, each of which has been explored in various respects in recent years by a number of philosophers: (1) those between belief and desire as *attitudes*, and (2) those between spatio-temporal location and person or self as kinds of *position*. Greater understanding of each of these sets of relations and parallels is likely to be important for answering many other questions beyond those of justifying induction and altruism.



Second, investigating the two questions together makes it possible to employ comparisons and exploit parallels in order identify, understand, and explore the full range of possible approaches to answering each of them. For while most general approaches have in fact been applied to both questions to at least some extent, some have nevertheless been more fully developed or more fully criticized in application to one of the two questions than to the other. In addition to the seemingly obvious approaches to the question of justification discussed in the previous section, at least six additional general approaches — often with many specific versions — may be distinguished in work to date on these questions:<sup>4</sup>

**1. Supplementalist:** Seek to establish the truth of a further general principle that could be used to justify the process in question. In the case of induction, such a principle might affirm the uniformity of nature, at least with respect to the laws governing it. In the case of altruism, such a principle might affirm the equality all persons or sentient beings, at least with respect to their worth or dignity.

**2. Rationalist:** Seek to establish that — even if we cannot directly show induction to be reliable or altruism to be value-tracking — use of the process in question is still required by reason or rationality, on the grounds that it is positively *irrational* to treat relevantly similar cases in different ways. In the case of induction, the manner of treatment would be belief, and the similar cases would be spatio-temporal locations. In

the case of altruism, the manner of treatment would be desire, and the similar cases would be persons or sentient beings.

**3. Pragmatic:** Seek to establish that — even if we cannot directly show induction to be reliable or altruism to be value-tracking — the process in question is in some way superior to all possible competitors for the purposes of attaining some worthy end, if that end can be attained at all. In the case of induction, this may take the form of arguing that, if there is *any* reliable method for generating beliefs about unobserved cases, then induction itself either is or will eventually lead us to accept and endorse that method. In the case of altruism, this may take the form of arguing that, if there is *any* method for generating desires about how things are for others that can be accepted and endorsed by all persons as value-tracking, then altruism itself either is or will lead to that method.

**4. Analytic:** Seek to establish that — even if we cannot directly show induction to be reliable or altruism to be value-tracking — the process in question is justified in virtue of the meanings of relevant normative terms. In the case of induction, this may take the form of arguing that it is part of the meaning of “good reason to believe” that induction (along with direct observation and deduction) provides good reasons to believe. In the case of altruism, this may take the form of arguing that it is part of the meaning of “good reason to desire” that altruism (along with immediate inclination and means-end deliberation) provides good reasons to desire.

**5. Foundationalist:** Seek to establish that — even if we cannot directly show induction to be reliable or altruism to be value-tracking — the process in question does not stand in any need of justification because the foundational character of its role makes it an inappropriate candidate for justification. In the case of induction, this may involve arguing that induction is a source of standards for justifying beliefs and hence cannot itself be evaluated by any standards concerning beliefs. In the case of altruism, this may involve arguing that altruism is a source of standards for justifying desires and hence cannot itself be evaluated by any standards concerning desires.

**6. Eliminationist:** Seek to establish that — appearances to the contrary notwithstanding — it is not necessary to use the process in question for the crucial endeavor to which it is often taken to be essential. In the case of induction, this involves arguing that science does not require induction and can instead proceed successfully using direct observation and deduction. In the case of altruism, this involves arguing that ethics does not require altruism and can instead proceed successfully using immediate inclination and means-ends deliberation.

Third, for similar reasons, investigating the two questions together makes it possible to employ comparisons and exploit parallels in order to identify, understand, and explore the difficulties and objections to which each general approach is subject. For example, in attempting to answer each ques-

tion of justification the following difficulties for and objections to particular approaches appear to arise:

1. The *Supplementalist* approach encounters difficulty in formulating a suitable general principle that is neither too weak for its intended purpose nor too strong to be plausible; and it is subject to the objection that defenses of the chosen principle will themselves beg the question.
2. The *Rationalist* approach is subject to the objection that differences of position (spatio-temporal location and person or self, respectively) are *real*; and it encounters difficulty in explaining without begging the question why we are justified in assuming that such differences are not rationally *relevant* for purposes of belief and desire.
3. The *Pragmatic* approach encounters difficulty explaining, without begging the question, why attainment of the proposed worthy end is sufficient for satisfactory justification in the absence of reliability or value-tracking, respectively; and it is subject to the objection that, especially without assurance of reliability or value-tracking, there is insufficient reason to think that *any* method *can* achieve that proposed end.
4. The *Analytic* approach encounters difficulty in explaining the semantics of normative terms such as “good reason” in such a way that the use of specific methods of generating belief or desire, respectively, are included in their meanings; and it is subject to the objection that seman-

tically descriptive premises, such as facts about what the meanings of terms *are*, cannot entail fully normative conclusions, such as facts about what *should* be believed or desired.

5. The *Foundationalist* approach encounters difficulty in demonstrating that no justification of the process in question is possible; and it is subject to the objection that the impossibility of justification does not show that no justification is desirable or needed.

6. The *Eliminationist* approach encounters difficulty in showing how other processes can successfully generate the complete range of beliefs or desires that would be generated by induction or altruism (for example, beliefs in specific universal generalizations or desires to engage in specific self-sacrificing acts), respectively; and it is subject to the objection that the replacement of these processes would require giving up essential aspects of the kinds of deep commitments we actually make in science and ethics.

None of this is to say, of course, that induction and altruism are necessarily parallel in every respect, nor that parallel general approaches to justification are guaranteed to play out with the same dialectic or with the same results in both cases.

Fourth, investigating the two questions together may stimulate and facilitate further investigations into the nature of *justification itself*. Such investigations are likely to be important or even essential for understanding normativity

as it arises in and applies to various objects of value, even beyond belief and desire. Indeed, in my view, finding and defending the correct answers to the justificatory questions about induction and altruism require general knowledge about the origin and nature of normativity, as well as knowledge that is specific to its application to science and ethics. Finding and defending the correct answers also require, in my view, a rethinking of the assumption that begging the question is always as fatal to legitimate *justification* as it is to legitimate *persuasion*. Moreover, Hume's own investigation of the fundamental normative concepts governing science and ethics, and of their bearings on the justification of induction and altruism, are particularly valuable for these purposes and are not yet fully appreciated.<sup>5</sup> But these are topics for another occasion.

Finally, investigating the two questions together may help those who were initially interested in only one of them to appreciate the significance and value of the other as well. More broadly, it may help to mitigate to some degree the common impression that science and ethics themselves, to which induction and altruism respectively seem so essential, are incommensurable activities. For as different as they may be, the similarities at their foundations are striking indeed.

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1 It is also because of this causal and explanatory connection to intentional action that mere rejected appearances are not beliefs (even though an unrejected appearance may qualify as a belief), and mere

2 David Hume, *An Enquiry concerning Human Understanding*, edited by Tom L. Beauchamp (Oxford: Clarendon Press, 2000) Section 4, paragraphs 19-21.

3 Thus, to the question, “How would you like it if other people didn’t care how things are for *you*?” the skeptic about altruism presumably replies, “Obviously, I wouldn’t like it; but why is that a reason for me to care about how things are for *them*?”

4 For present purposes, I will not undertake the definitive attribution of particular approaches to particular authors, either historical or contemporary, since that would in many cases require further interpretative argumentation beyond the scope of this essay.

5 For some analysis of Hume’s contributions, see Don Garrett, *Hume* (London and New York: Routledge, 2014), especially Chapters 4-8.