Jun 5th, 2:00 PM - 3:00 PM

Argument, Inference, and Persuasion

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Abstract: I move beyond Pinto's (2001) discussion of arguments as invitations to inference by highlighting how arguments can guide the performance of inferences that they do not express. This motivates a distinction between two types of persuasive force arguments can have in terms of two different connections between arguments and inferences. I use this distinction to explain how epistemically bad arguments can rationally persuade addressees of their conclusions.

Keywords: Argument, Inference, Persuasion

1. Introduction

According to Robert Pinto in his, "The Relation of Argument to Inference" (2001), the typical goal of arguments is to effect an inference in the person to whom the argument is addressed (p. 36). Pinto's view of arguments as "invitations to inference" (p.37) highlights the connection between the persuasive force of an argument and the performance of a corresponding inference. According to Pinto, you come to believe that a statement *p* is true by virtue of being persuaded by an argument just in case your belief that *p* is the result of your performance of an inference that is expressed by the argument.

In this paper, I distinguish between two types of persuasive force arguments can have in terms of two different connections between arguments and inferences. First, borrowing from Pinto (2001), an argument *directly* persuades an addressee if the addressee performs an inference that is expressed by the argument. This raises the question of what is required in order for an argument to express an inference. Second, borrowing from Sorenson (1991), an argument *indirectly* persuades an addressee if the argument guides the addressee's performance of an inference not expressed by the argument. This raises the question of how arguments can guide inferential reasoning they do not express.

The primary aims here are: (i) to spell out what is required in order for an argument used as an instrument of persuasion to express an addressee's inference, and (ii) to highlight the capacity of arguments to guide inference. On my view, it is a belief-inducing inference that is performed when one is persuaded by the corresponding argument. Such inferences are essentially characterized by what Boghossian (2014; 2018) calls the 'Taking Condition.' The paper moves beyond Pinto (2001) by appealing to the Taking Condition in service of aims (i) and (ii), bringing the epistemology-of-inference literature to bear on the informal-logic literature concerning the connection between argument, inference, and persuasion.

I begin by clarifying the notion of an invitation to inference and the nature of the inferences that such invitations invite working from Pinto (2001). Next, I distinguish between being *directly* and *indirectly* persuaded by an argument. I then conclude.

2. Invitations to inference

Initially understanding arguments as instruments of persuasion (2001, p.36), Pinto characterizes them as invitations to inference.

> the premisses that are put forward by the arguer are intended to elicit assent to the argument's conclusion by forming the basis of an inference drawn by the person to whom the argument is addressed. (p.37)

This motivates Pinto's view of the evaluative dimension of arguments.

> Logical appraisal of an argument deals, I would suggest, with the issues raised by the question of whether the inference invited…is an inference that ought to be made—and more particularly, ought to be made by the person to whom it is addressed. (2001, p. 37)

Of course, spelling out this evaluative dimension is a substantive task. A plausible starting point is that the logical appraisal of an invitation to inference concerns whether the inference that is invited is an epistemically good one that the addressee ought to perform. Even without a full-blown story about epistemic goodness and the nature of the "ought," it isn't hard to see why Pinto is skeptical that formal logic has the methodological resources sufficient for the logical appraisal of an invitation to inference. For example, the soundness of an argument (valid plus true premises) seems neither necessary nor sufficient for the corresponding inferential reasoning being epistemically good (Pinto 2001, p. 38; see also Harman 1986, p.3ff).

Here, I am interested in clarifying when an invitation to inference is rhetorically successful. The rhetorical success conditions of invitations to inference seem conceptually prior to their logical appraisal. For example, an invitation to inference isn't successful unless the argument used corresponds to a possible inference that the addressees can perform. If this fails to obtain, then the issue of whether the addressee ought to perform the inference doesn't arise. Here an *ought* presupposes a *doxastic can*.

My consideration of invitations to inference starts from Pinto's observation of a connection between argument, inference, and persuasion.

> [I]magine a situation in which the presentation of an argument caused assent to its conclusion but in which the addressee did not make an inference from the argument's premisses to its conclusion. For example, the argument is actually too complicated for the addressee to follow, but worn down by its length and caught up by the arguer's charm, the addressee's resistance to the conclusion disappears. Would we count this as a case in which the addressee was persuaded by the argument to accept its conclusion? Caused, yes. But not, I maintain, persuaded. (2001, p. 37)

The rhetorical success of an invitation to inference consists of the addressee being persuaded by the argument to accept its conclusion. An addressee is so persuaded just in case the addressee infers the conclusion from her acceptance of the given premises.

> Arguments succeed when the persons to whom they are addressed accept their conclusions on the basis of their premisses. Arguments fails when the addressee either

> refuses to accept their premisses, or accepting their premisses does not draw the intended conclusion from those premisses. (Pinto 2001, p. 37)

According to Pinto, the success of an invitation to inference consists of the addressees being persuaded by the argument as this is signaled by their performance of an inference from the argument's given premises to its conclusion. To emphasize, I take Pinto to be concerned here with the rhetorical success of arguments *qua* instruments of persuasion. Accordingly, an argument may be successful in this sense even though the addressee ought not to have performed the inference invited. I'll refer to the following as Pinto's claim.

(Pinto's claim) You are persuaded by an invitation to inference if and only if (iff) you perform the inference that is invited, i.e., you perform the inference that it invites.

Pinto's claim makes explicit that in order for an addressee to be persuaded by an invitation to inference the addressee must perform the inference that is expressed by the argument.

In the rest of the paper, I am concerned with Pinto's claim in two respects. First, in the remainder of this section, I characterize the operative notion of inference.[1] This will clarify how arguments used as instruments of persuasion express and, therefore, invite inferences. Second, in the next section, I question the only-if part of Pinto's claim by highlighting how an invitation to inference can indirectly persuade an addressee even though the addressee performed an inference the argument doesn't express. I then argue that an invitation to inference may succeed in a way unaccounted for by Pinto's claim.

In what follows, I take an argument to be a finite list of statements, one of which is designated as the conclusion and the rest as premises (e.g., see Goldman, 2003 p. 27; Feldman 1994, p.172).[2] On this approach to arguments, an invitation to inference is the *use* of an argument to invite an addressee to perform an inference that the argument expresses. Hereafter, this is the notion of *invitation to inference* at play. An account of what makes invitations to inference so understood successful should tell us what is minimally required for an argument to express an inference. This turns on the relevant notion of inference. I now explicate a notion of inference that I call belief-inducing inference which I take to be operative in Pinto's claim.

Belief-inducing inferential reasoning is a type of reasoning Broome (2013, sec. 13.1) calls active, belief reasoning, which is theoretical reasoning that concludes in one believing something and which is conscious in the sense that the reasoner is conscious of, i.e., explicitly aware of, the

[1] Pinto (2001, sect. 2) develops a notion of inference with the two-fold aim of meeting challenges to a causal theory of inference and making liability to criticism an essential component of the concept of inference. As I indicate just below, my interest in inference here is somewhat different and motivates a discussion different from Pinto's. I believe that the notion of inference I sketch here satisfies Pinto's aims. I don't have the space to elaborate.

[2] This characterization deviates from Pinto's notion according to which an argument is "a set of statements or propositions that one person offers to another in the attempt to induce that other person to accept some conclusion" (2011, p. 32). My rationale for my characterization is that I want to first consider what is minimally required in order for a set of statements to express an inference independently of its successful use as an invitation to inference. Afterwards, I'll consider what is further required in order for an argument so used to express and, therefore, invite an inference. The plausibility of this way of proceeding assumes that what inference is invited by an argument used as an invitation to inference depends on what is necessary for the contents of an argument *qua* premise-conclusion complex of statements to express an inference. At any rate, characterizing arguments independently of their potential uses serves as a heuristic for taking seriously the distinction between arguments and uses of them. Many informal logicians think that this distinction should be accommodated by any plausible full-blown theory of argument (e.g., Blair, 2004; Hitchcock, 2006).

contents of the given premise and conclusion beliefs of the inference. This is in sync with Boghossian's characterization of inference as a relation between beliefs and reasoning that is "person-level, conscious and voluntary, not sub-personal, sub-conscious and automatic" (2014, pp. 2-3).

For example, you accept (i) that if Beth drinks beer just before dinner, then she doesn't want dessert just after. You notice (ii) that Beth is drinking beer just before dinner. You infer that Beth does not want dessert just after. Because you believe this, you don't cut her a piece of pie when serving dessert. The reasoning here exemplifies a transfer of certainty from the acceptance of initial starting points to acceptance of the conclusion. This cognitive import turns on your taking statements (i) and (ii) to support the conclusion and performing the inference because of this fact, which makes both (i) and (ii) reasons *for which* you believe the conclusion.

Pinto's claim says that you are persuaded by an argument if you perform an inference that is expressed by the argument. That the addressee must perform a belief-inducing inference in order to be persuaded by the corresponding argument accounts for why such persuasion registers the addition of a belief or an increase in credence of a belief acquired by some other means. Belief-inducing inference is essentially characterized by what Boghossian calls the Taking Condition.

According to Boghossian, a transition from some beliefs to a belief counts as an inference only if what he calls the Taking Condition obtains.

> (Taking Condition) Inferring necessarily involves the thinker taking his premises to support his conclusion and drawing his conclusion because of that fact. (2014, p. 4)

My interest in the Taking Condition is its potential role in accounting for what inference is expressed and, therefore, invited by an invitation to inference. Accordingly, I apply the Taking Condition to belief-inducing inference: if you infer—in a belief-inducing sense—a statement *q* from a statement *p*, then, you take *p* to support *q* and draw your conclusion because of this fact.

The Taking Condition grounds the cognitive import of belief-inducing inference. If you infer *q* from *p* in a belief-inducing way, then there is a transfer of credence from your acceptance that *p* to your acceptance that *q* because you take *p* to support *q* and perform the inference because of this fact. If you reason from *p* to *q* and there is no transfer of your credence from your acceptance that *p* to your acceptance that *q*, then either you didn't take *p* to support *q* or you did, but you didn't reason to *q* from *p* because of this fact. In either case, the Taking Condition is not satisfied and so *p* is not a reason *for which you* believe *q*, i.e., the reasoning is not belief-inducing inferential reasoning.[3] In order to explicate the notion of support at work in the *taking* operative in belief-

[3] As Boghossian notes (2014, p.12), the Taking Condition shouldn't be understood in terms of some occurrent mental state. For example, taking *p* to support *q* doesn't require that one have a meta-belief about the relation of support between statements *p* and *q*. Boghossian illustrates the significance of taking so understood to the performance of an inference using a rule-following picture of inference, which he thinks satisfies the Taking Condition (2014, p.12). To illustrate, suppose that you accept *p* and $p \rightarrow q$ and infer *q*. Your following a *Modus Ponens* inference rule explains and rationalizes your accepting *q* on the basis of your accepting *p* and $p \rightarrow q$. You take the premises to conclusively support the conclusion by virtue of following a *Modus Ponens* rule that sanctions your accepting the conclusion on the basis of your acceptance of the premises. A rule-following picture of inference satisfies the Taking Condition in the sense that if you follow an inference rule that explains and rationalizes your acceptance that *q* on the basis of your accepting *p*, then, intuitively, you take *p* to conclusively support *q* and perform the inference because of this fact. As Boghossian observes, this is consistent with the fact, "that our thoughts can be under the influence of rules even if we have not explicitly formulated those rules to ourselves and would be unable to do so with great precision if we tried" (2014, p. 12).

inducing inference, I now show how the Taking Condition connects belief-inducing inference with reason-giving.

The Taking Condition does this as follows: (i) A necessary outcome of your performance of a belief-inducing inference from *p* to *q* is that *p* becomes a reason *for which* you believe *q*. In support of (i), by the Taking Condition; (ii) if you perform a belief-inducing inference from *p* to *q*, then you take *p* to support *q* and draw the conclusion because of this fact; and, (iii) If you draw the conclusion because of this fact, then *p* is a reason you have for believing *q* and an actual basis of your belief that *q*, i.e., *p* is a reason *for which* you believe *q*. Claims (ii) and (iii) support (i).

To briefly elucidate (iii), if you take *p* to support *q*, then *p* is a reason you have for believing *q*. Here I follow Audi (1993, p. 235) in understanding a reason *S* has for believing something as personal, but not necessarily normative. That is, *S* has a reason to believe *p* for believing a statement *q*, when S believes *p* and believes that *p* is a reason to believe *q*, even if p isn't actually a reason to believe *q*, i.e., that S's belief that *p* is a reason to believe *q* is false.

For example, you and I see and thereby believe that Beth's car is in the driveway. That Beth's car is in the driveway is a reason I have for believing that Beth is not at work because I also believe that whenever Beth's car is in the driveway she is not at work. Given my background belief, I take *Beth's car is in the driveway* to support *Beth is at home*. However, I could be wrong. Suppose that, unbeknownst to me, Beth started carpooling to work. In such a case, that her car is in the driveway is not a reason to believe that she is at home. You have no background beliefs that bear one way or the other on the connection between the whereabouts of Beth's car and her being at work. You do not take *Beth's car is in the driveway* to support *Beth is at home*, since the former is not a reason you have for believing the latter.

The Taking Condition grounds the deductive-inductive distinction in terms of inferences and not arguments (Boghossian, 2014, p. 5). An inference is deductive only if the inferer takes the premises to *conclusively* support the conclusion. For example, consider the following basic argument pattern of an appeal to popular opinion.

It is widely held among population *P* that *p*
∴ *p* is true

Suppose that for a given instantiation of *P* and *p*, Beth and Kelly both infer the conclusion from the premise. Beth takes the premise to conclusively support the conclusion. However, Kelly takes the premise to be inconclusive, abductive support for the conclusion. That Beth's and Kelly's inferences are different is partly explained by the fact that they take the premise to support the conclusion in different ways, conclusively and inconclusively, respectively. Beth's deductive inference may well commit the *ad populum* fallacy because she accepts that the premise is a conclusive reason she has to believe the conclusion. However, where the members of *P* are in a position to know about *p*, or when the best explanation of the prevalence of the belief that *p* among *P* is that *p* is true, Kelly's inference *qua inference to the best explanation* may well be cogent.

I don't have space to defend Boghossian's appeal to the Taking Condition in his explication of the nature of inferential reasoning.[4] The significance of the Taking Condition here is that it accounts for an argument's expression of an inference: an argument expresses a reasoner's

[4] Some think that the Taking Condition is not applicable to all types of inferential reasoning and so its role in getting at the nature of inference is unclear (e.g., Wright 2014). Others think that the Taking Condition may be a necessary condition for what I am calling belief-inducing inference, but against Boghossian think that it isn't a primary explanatory desideratum for an adequate account of belief-inducing inference (e.g., Hlobil 2014).

inference just in case the reasoner takes the premises to support the conclusion and performs the inference because of this fact. To illustrate, consider the following argument (A).

[1] If Beth is at home, then her car is in the driveway.
[2] Beth's car is not in the drive way.
∴ [3] Beth is not at home.

Suppose that Kelly, Paige, and Shannon perform deductive belief-inducing inferences from the premises to the conclusion. Kelly, untutored in logic, performs her inference on the basis of her intuition that it seems right. She does not recite or conceptualize her reasoning process, nor does she intend that her premise-beliefs support the conclusion belief in any one specific way as opposed to another. However, Paige and Shannon both recently completed formal logic courses. Paige reasons *via modus-tollens*. Shannon never learned *modus tollens*. She reasons as follows. By contraposition, she infers from [1] that if Beth's car is not in the driveway, then Beth is not at home. From this and [2] she infers [3] by *modus ponens*.

Argument A expresses their inferences since each infers A's conclusion from the premises because they take the premises to support the conclusion. This is compatible with them cognizing their inferential routes from premises to conclusion in different ways or, as with Kelly, not at all. Since the Taking Condition does not over-intellectualize belief-inducing inference, an argument's expression of such an inference doesn't require that it represent an inferential route (intended or otherwise) from premise-belief to conclusion-belief. If the inferential performances of Kelly, Paige, and Shannon were induced by my use of (A) as an invitation to deductive inference, then it would be rhetorically successful.

To summarize, Pinto's (2001) claim tells us that an addressee is persuaded by an argument iff she performs an inference that the argument expresses. Plausibly, such an inference is belief-inducing and so is essentially characterized by the Taking Condition. This motivates thinking that an argument expresses a reasoner's inference iff the reasoner takes the premises to support the conclusion and infers the conclusion from the premises because of this fact. Therefore, appealing to Pinto's claim, an addressee is not persuaded by an invitation to inference unless the addressee takes the argument's premises to support the conclusion and performs a belief-inducing inference from the premises to conclusion because of this fact.

A typical informal-logic textbook characterization of arguments distinguishes premises as the reasons being offered by the arguer for the conclusion.[5] A rationale for this is clear with respect to invitations to inference. Recall that you take *p* to support *q* iff *p* is a reason you have for believing *q*. Plausibly, the premises of an argument used to invite a belief-inducing inference are advanced by the arguer as reasons the addressees have for accepting the conclusion.

Therefore, in order for an addressee's inference to be expressed and, thereby invited by an invitation to inference, the addressee's *taking* has to be in sync with the nature of the support the arguer intends the premises to provide the conclusion. For example, an addressee's inductive inference is not invited by an invitation to inference that invites a deductive inference. In short, you perform the inference that is expressed by an invitation to inference if you take the premises to support the conclusion in the way intended by the arguer (e.g., conclusively or otherwise) and draw the conclusion because of this fact.

[5] E.g., Bassham, Irwin, Nardone, and Wallace 2005, p.30; Govier 2010, p.1; Hurley 2015, p. 1; Feldman 1999, p.6; Sinnott-Armstrong and Fogelin 2010, p.3.

3. Direct and indirect persuasion

I now distinguish between direct and indirect persuasion. An invitation to inference *directly* persuades an addressee when the addressee takes the premises to support the conclusion in the way intended by the arguer and draws the conclusion because of this fact. This results in the premises becoming reasons *for which* the addressee believes the conclusion. An invitation to inference *indirectly* persuades an addressee when the argument used guides the addressee's performance of a belief-inducing inference even though the addressee does not take the premises to support the conclusion. Such persuasion doesn't result in the premises becoming reasons *for which* the addressee believes the conclusion.

An invitation to inference is (rhetorically) successful only if the addressee is persuaded by the argument. Pinto's claim entails that an addressee is persuaded by an invitation to inference only if the addressee performs the inference that is expressed by the argument. Again, an addressee performs the inference that is expressed by the argument iff the addressee infers the conclusion in a belief-inducing way because she takes the premises to support the conclusion in the way intended by the arguer. Therefore, an invitation to inference is successful only if the addressee infers the conclusion in a belief-inducing way from the premises because she takes them to support the conclusion in the way intended by the arguer.

I now argue against this conclusion by making the case that an invitation to inference may indirectly persuade an addressee by serving as a guide to her performance of an inference not expressed by the argument. Since an argument may indirectly persuade an addressee to accept its conclusion, an invitation to inference may succeed in a way unaccounted for by Pinto's claim. This motivates skepticism of the only-if part of Pinto's claim. Before elaborating, I first say something about direct persuasion.

An argument that *directly persuades* an addressee guides her inferential performance by expressing the (possible) inference from its premises to conclusion that the addressee is invited to perform. Since the arguer advances the premises as reasons the addressee has for believing the conclusion, we may say that the inference invited is a rationality generator (RG). An inference is an (RG) when the premise-beliefs rationalize believing the conclusion. Recall that if S takes *p* to support *q* and performs a belief-inducing inference because of this fact, then *p* is a reason for which S believes *q*. Such an inference is a RG when S being in the antecedent mental state of believing *p* rationalizes the formation of S's new belief in *q* by virtue of S *believing p* making it rational for S to *believe q* (following Wedgewood, 2006, p. 662).

This picture of direct persuasion is slightly complicated by the fact that an arguer may aim to persuade an addressee by means of inviting the performance of an inference that reflects the inferential route from premises to conclusion represented by a given derivation of the argument's conclusion from its premises. Kitcher remarks that the use of an argument as an instrument of persuasion may aim to induce a belief-inducing inferential process from premises to conclusion in the addressee that (i) is isomorphic to that which sustains the homologous conclusion belief in the arguer, or (ii) is of a type that has a high-frequency of generating true beliefs (1991, p.4). As Kitcher acknowledges, often both success criteria are simultaneously satisfied. However, he thinks that (ii) is more fundamental: "For what we should really care about is the means by which people can be led to form epistemically virtuous beliefs" (1991, p.4).

For example, if an argument is used to invite a deductive inference that is a knowledge generator (KG) (for short, a KG inference), then it is plausible to think that in addition to the argument a deduction of the conclusion from the premises must be given. Borrowing from

Sundholm (2012), a belief-inducing inference is a KG inference when an inferer's knowledge that the premises are true transfers to her knowledge that the conclusion is true. On Sundholm's view, an inference is a KG-inference only if the inferer has the proper epistemic warrant to know the conclusion on the basis of her knowledge of the premises (2012, p. 945). With respect to a deductive inference, Sundholm thinks that this requires possessing—in some sense—a deduction that begins with the given premises and ends in the conclusion (p. 950). Following Sundholm, an argument expresses a KG-inference that is deductive only if it's accompanied by a deduction of the conclusion from the given premises. An invitation to a deductive KG-inference invites the inference from the given premises to conclusion *via* the inferential route represented by the given deduction. The deduction guides the inferer's inferential transitions in drawing the conclusion from the premises.

An invitation to inference invites the performance of a deductive KG inference, only if the arguer advances the premises as conclusive reasons to believe the conclusion. Following Audi (1993, p.235), reasons to believe are impersonal and normative. For example, there can be reasons to believe that there is life on Mars even if no one actually believes this or believes the propositions constituting the reasons. Plausibly, if an invitation to inference invites the performance of a deductive KG inference, the premises must be conclusive reasons for which the arguer believes the conclusion. This motivates the normative requirement that an invitation to a deductive KG inference isn't good unless the arguer takes the premises to conclusively support the conclusion (e.g., see Goldman, 1994, p.34).[6] In short, an argument can't express a KG inference, indefeasible or otherwise, unless its premises justify the truth of the conclusion. Accordingly, an arguer that uses an argument as an invitation to a KG inference advances the premises as reasons addressees have *to* believe the conclusion as opposed to reasons *for* believing the conclusion, which, as previously discussed, are personal and not necessarily normative.

I now consider indirect persuasion using Sorenson's case for thinking that the syntactic circularity of an argument doesn't rule out it being rationally persuasive. Sorenson (1991, p.248) maintains that the following argument (B) is rationally persuasive and so not objectionably circular.

Some arguments are written in black ink
∴ Some arguments are written in black ink

He holds that since the argument exemplifies the truth of the conclusion, it isn't defective. Since (B) itself constitutes an ontic reason for accepting the conclusion, (B) provides the basis for rationally accepting the conclusion (1991, pp. 253-254). According to Sorenson, this illustrates

[6] Contra some epistemological theorists of good arguments (e.g., Lumer 2005, p.225), I don't believe that the concept of rational persuasion demands that invitations to inference must invite knowledge generators. I think this is in sync with Pinto's epistemological view of good invitations to inference. Such a demand overly restricts the legitimate function of arguments to rationally persuade addresses of the conclusion. For example, suppose that an arguer is a Kantian who advances an argument to persuade an addressee who the arguer knows to be a Utilitarian that she shouldn't lie to her father. The arguer uses a premise that draws on a Utilitarian principle that the arguer does not accept. The arguer is attempting to convince the addressee of the conclusion, which the arguer accepts based on her acceptance of a Kantian principle. However, the arguer lacks the time and wherewithal to change the addressee's mind regarding the right ethical theory. The suasive aim of the arguer is to rationally persuade the addressee that she shouldn't lie to her father based on her ethical commitments, not the arguer's. The inference that the arguer invites the addressee to perform is a rationality generator, not a knowledge generator.

that whether or not an argument is objectionally circular turns on its epistemic properties, not its syntactic properties.

Goldman (2003) is not persuaded by Sorenson's use of (B) to illustrate a syntactically circular argument that is rationally persuasive. He claims that presented with (B), an addressee is likely to deploy another argument such as (C) to reach the conclusion (2003, p.56).

> The displayed argument (B) is written in black ink.
> ∴ Some arguments are written in black ink.

Argument (C) is epistemically sound: the conclusion logically follows, and its premise is supported by the perceptual evidence that (B) is written in black ink. Goldman remarks that,

> it is highly plausible that [(C)] is what a reader would think to himself in reasoning to the indicated conclusion, and this mode of reasoning or inference is unobjectionable. Of course, the premise of [(C)] refers to [(B)] so [(B)] does get appealed to in the reader's thought process. (2003, p.56)

Goldman concludes that,

> it is clear that a reader/inspector of [(B)] can become rationally persuaded of [(B)]'s conclusion, but not so clear that this is *via* an inference that uses [(B)]. So, this example does not clearly identify a non-defective argument with the syntactic form 'P; therefore, P'. (2003, p.56)

Note that the circularity of (B) rules out its successful use as an invitation to inference with the aim of directly persuading the addressee of its conclusion because it fails to express a possible belief-inducing inference. It can't express such an inference since the premise and conclusion are one and the same. So, if the belief-inducing inference that must be performed in order to be rationally persuaded by (B) must be expressed by (B), then (B) can't be a rationally persuasive argument.

However, as Goldman admits in the first quote above, the inference expressed by (C) does appeal to (B). Plausibly, (B) serves as a guide to the inference by virtue of providing the evidence for the starting point and by providing the endpoint, i.e., the intended conclusion. Loosely, argument (B) guides the rational belief-inducing inference expressed by argument (C), because argument (C) is constructed from (B). So, borrowing from Sorenson (1991, p. 255), even if Goldman is right that when presented with argument (B) in a context of persuasion an addressee's belief-inducing inference would be expressed by (C), (B) nevertheless guides the addressee's inference. Argument (B) indirectly persuades the addressee of (B)'s conclusion.

There are many forms of indirect persuasion that do not bring self-referential arguments into play. For example, suppose that a classical logician advances the premises of the following disjunctive syllogism (D) as conclusive reasons for an addressee S to accept the conclusion.

> The keys are in the kitchen or in car
> The keys aren't in the car
> ∴ They are in the kitchen

Further suppose that unbeknownst to the arguer S is a paraconsistent logician who thinks that although (D) is deductively invalid it provides strong but non-conclusive reasons for S to believe the conclusion in part because S thinks that the situation is consistent and thus there is no truth-value glut.[7] S accepts the premises on the basis of the arguer's testimony and infers—in a belief-inducing way—the conclusion. However, (D) doesn't express S's inference since S does not take the premises to support the conclusion in the way intended by the arguer. Nevertheless, S is indirectly persuaded by (D) since the argument displays (non-conclusive) reasons for which S accepts the conclusion.

Here's another example of indirect persuasion. To save space, I'll use propositional variables. Suppose an arguer advances argument (E) as an invitation to inference.

p v q
p→r
<u>q→r</u>
∴ r

Further suppose that the addressee S explicitly takes the premises to support the conclusion, i.e., S accepts that the premises are reasons for her to believe the conclusion. However, S believes *p* v *q* only because she believes *p*. S infers the conclusion from her beliefs that *p* and *p*→ *r* following a *modus ponens* inference rule. (E) does not express S's inference: although S takes (E)'s premises to support the conclusion, she doesn't perform the inference because of this fact. The argument that expresses S's inference is derived from (E) *via* S's *premise pruning*. Intuitively, (E) guides S's reasoning, since it provides its endpoint and a starting point that licenses her use of *modus ponens*.[8]

In agreement with Sorenson, the explicitly circular argument (B) can be successfully used as an invitation to inference by virtue of guiding the performance of an epistemically sound inference that it does not express. In such a case, the addressee is indirectly persuaded by the invitation to inference. However, against Sorenson, this doesn't require that (B) be non-defective. This is because defective arguments may guide the performances of epistemically sound inferences that they do not express. Therefore, in agreement with Goldman, that (B) can be successfully used to rationally persuade (in an indirect way) an addressee of its conclusion does not show that it isn't objectionably circular. To elaborate by way of another illustration, consider the following.

Suppose that an arguer uses argument (F) as an invitation to inference to persuade an addressee S of its conclusion.

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[7] E.g., Priest (2008 p.155) accepts that situations in which a statement is both true and false can be used to generate counterexamples to Disjunctive Syllogism (DS). However, Priest thinks (DS) cannot lead us from truth to untruth with respect to consistent situations, which are the norm, and so he thinks (DS) may express inductively strong inferences.

[8] Enthymemes provide further material for examples of indirect persuasion. To illustrate briefly, suppose that an arguer presents the following enthymeme (G) as an invitation to inference.

<u>Kelly is a member of the NRA</u>
∴ Kelly is a gun owner

Suppose that the arguer assumes *that every NRA member is a gun owner* is common knowledge and advances the premise as a conclusive reason in conjunction with this suppressed premise for the addressee S to believe the conclusion. In advance of fact-checking, S thinks it plausible that there might be members of the NRA who do not own guns. Suppose S draws the conclusion from the premise in an ampliative way, believing that most NRA members are gun owners. S's inference is not the one invited. Nevertheless, she is indirectly persuaded by the enthymematic argument because it guides her inferential performance.

Kelly, Paige, Shannon, Beth, and Matthew need a ride to the beach
∴ We can't take the Smart car.

Suppose that S just learned that Matthew now no longer needs a ride to the beach, but correctly believes that the others do on the basis of the arguer's testimony. Suppose further that from this premise-belief S infers—in a belief-inducing way—(F)'s conclusion because she correctly believes that the Smart car is too small to transport the others. (F) does not express S's inference since S does not take the premise to support the conclusion. S thinks it's false. Nevertheless, S is indirectly persuaded by (F); the argument guides S's inference. In conjunction with S's background beliefs, (F) generates the starting pointing *via premise weakening* and provides the endpoint, which is (F)'s conclusion. In this scenario, a defective argument guides the performance of an epistemically sound inference.

If you perform an epistemically sound inference, because you are *indirectly* persuaded by an argument, then the argument needn't be non-defective. This reflects that bad arguments may guide addressees' performances of epistemically sound inferences.[9] However, if you perform an epistemically sound inference, because you are *directly* persuaded by an argument, then the argument must be non-defective since the argument expresses the inference.

In sum, these illustrations suggest that if an invitation to inference provides at least one starting point and the endpoint of an addressee's inference, which is the conclusion intended by the arguer, then it guides the reasoning even though the inference performed may not be invited. By virtue of serving as a guide to the addressee's inferential reasoning, the argument indirectly persuades the addressee to accept its conclusion. This makes the invitation to inference rhetorically successful. One may question whether an invitation to inference need be an argument or whether it must provide the inference's conclusion in order to invite the inference.[10] I don't have space to elaborate. What I am pointing to here is that the phenomenon of indirect persuasion highlights the persuasiveness of an invitation to inference, and therefore it's rhetorical success, turns on the psychological make-up of the addressees (e.g., their belief-sets), and not merely on the intentions of arguers or the contents of their arguments. This is in sync with the argumentation motto: know your audience!

4. Conclusion

[9] Goldman (1994, p. 45) briefly acknowledges this in a footnote and takes this to show that the theory of folk-argumentative rules he presents is incomplete. Even if one follows Goldman and takes true-belief consequences to be the sole end of argumentation, this does not rule out that an invitation to inference might be good because it *indirectly persuades* the addressee to accept the truth of the conclusion on the basis of an epistemically sound inference guided by the argument.

[10] To briefly elaborate by way of an illustration, suppose Kelly and Paige have demonstrated a reluctance to eat their peas. Observing this, Dad says, "No dessert unless you eat your peas!" with the intention of inducing Kelly and Paige to generate a belief by way of an inference from their acceptance that eating their peas is a requirement for dessert. Dad wants to wrap up dinner. The sisters reason as follows.

Kelly: no dessert unless I eat my peas, I will not eat my peas; therefore, no dessert for me.

Paige: no dessert unless I eat my peas, I want dessert; therefore, I will eat my peas.

Their different conclusion beliefs prompt different actions: Kelly pushes the plate away and leaves the table; Paige eats her peas. Dad uses his assertion to invite inferences that his assertion does not express. Nevertheless, Dad's invitation to inference is successful because Kelly and Paige reasoned to beliefs that prompted them to finish—in different ways—their dinners.

To summarize, (i) an invitation to inference is rhetorically successful only if the addressee accepts the conclusion because she is persuaded by the argument. By Pinto's claim, (ii) an addressee accepts the conclusion because she is persuaded by the argument only if she performs the inference that is invited., i.e., the addressee performs the inference that is expressed by the argument. From (i) and (ii), it follows that (iii) an invitation to inference is rhetorically successful only if the addressee performs the inference that is expressed by the argument.

Invitations to inference invite belief-inducing inferences, which are essentially characterized by the Taking Condition. This motivates understanding (iii) as (iv) an invitation to inference is rhetorically successful only if addressees take the premises to support the conclusion in the way intended by the arguer and draw the conclusion because of this fact. However, an addressee may be indirectly persuaded by an argument even though she either doesn't take the premises to support the conclusion in the way intended or she does but doesn't draw the conclusion because of this fact. Given (i) and given that indirect persuasion is a form of persuasion, (iv) and so (iii) seem false. This motivates skepticism of (ii). An invitation to inference may be rhetorically successful by indirectly persuading the addressee to accept the conclusion.

The Taking Condition grounds the difference between direct and indirect persuasion. If an addressee is directly persuaded by an argument, then the addressee takes the premise(s) to support the conclusion and infers the conclusion from the premise(s) because of this fact. If an addressee is indirectly persuaded by an argument, then it is not the case that the addressee takes the premise to support the conclusion and infers the conclusion from the premises because of this fact.

I end with two quick takeaways. First, an addressee may be *directly* persuaded by an argument by drawing its conclusion from the premise(s) in different ways. This runs counter to characterizations of argument according to which the reasoning from premise(s) to conclusion is an essential feature of an argument (e.g., Simard-Smith & Moldavan, 2011; Vorobej, 2006; Parsons, 1986; Harman, 1986). Second, an argument that isn't epistemically good may *indirectly* persuade an addressee by inducing her performance of a corresponding inference that is epistemically good. An epistemically bad argument may function to rationally persuade an addressee of its conclusion (contra Lumer, 2005; Siegel & Biro, 2006). In such a case, the evaluative dimensions of the argument do not ground the normative quality of the corresponding inference.

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