

Spinoza and the inferential nature of thought

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This paper makes a claim about how Spinoza understands the nature of thought. More specifically, it proposes that for Spinoza thought as such is *inferential*: to think is to infer, which, as a first pass, means to grasp the consequences or implications of what is being represented.

In what follows I flesh out this claim in more detail, and substantiate it textually. I also show that approaching Spinoza's epistemology through the framework of the notion of inference allows us to see many *prima facie* disparate epistemological doctrines – bearing on understanding, truth, adequacy, mental causality and the difference between intellect and imagination – as part of a single, unified account. In this respect, the contribution of the paper is primarily a systematizing one.

1.

I will start with some terminological clarifications. First, Spinoza himself does not talk in terms of “inference”, but rather in terms of “deducing [*concludere, deducere*]” and “following [*sequi*]”.² By “inference” in this paper I mean whatever Spinoza himself means by those two terms; fleshing out what *that* is will be my primary task in what follows.

My second clarification concerns the term “thought”. In this paper, my claim about the “inferential nature of thought” is restricted to *veridical* thought, i.e. thought in what is for Spinoza its ontologically and explanatorily basic form (*Ethics* [E], 2p32).³ According to Spinoza, all thinking is ultimately the activity of an omniscient, infallible substance; thinking done by finite knowers like ourselves is merely a partial expression of that activity (E2p11c). Spinoza also refuses to grant nonveridical thought its own distinct properties, taking it to be merely the state of (veridical) thought's incompleteness (E2p33). So falsehood, fiction, uncertainty, fuzziness, points of view, all crucial to thought as we know and experience it, are all secondary phenomena for Spinoza, requiring additional explanation and determinate causal mechanisms. That is, it is not *qua* thinking simpliciter that thinking can be erroneous, fictitious, perspectival, or unreliable; these become possible only once thought is considered in isolated fragments. This means

1 I'm grateful to Lilli Alanen, Deborah Brown, John Carriero, Sam Newlands, Justin Steinberg, the audiences at the UCLA Early Modern Philosophy workshop and the Tahoe Harvard Early Modern Philosophy workshop, and to many long conversations with Josefine Klingspor, for allowing me to refine the ideas in this paper.

2 For a recent discussion of deductive links between Spinozistic ideas see Peterman 2018.

3 I use Curley (trans. and ed.) 1984 throughout the chapter.

that even if the sort of thinking *we* engage in is to us a phenomenon of greater (introspective, intersubjective, ethical) significance, it's also the case that in Spinoza's framework it is possible (and, arguably, in the order of knowing necessary) to deal with thought as it exists in relation to substance alone first. This paper is intended as an exercise in this sort of preliminary and incomplete clearing of the terrain, one that leaves the question of the inferential nature of thought as this manifests itself in specifically human experience for another time.

Here is one last terminological clarification: there is another term Spinoza has for this necessarily veridical thought: “understanding [*intelligere*]”, or thinking done by an “intellect”. For example, he writes:

A true idea must agree with its object (by [E1]ax6), i.e. (as is known through itself), what is contained objectively in the intellect must necessarily be in nature (E1p30d)⁴

This notion of “intellect” does not appear in discussions of Spinoza's epistemology as often as the better known categories of kinds of knowledge (imagination, reason, and intuition [E2p40s2]).⁵ Spinozistic intellection (“understanding”) includes both rational and intuitive thought. In other words, it is contrasted with the merely “imaginative” thinking capable of giving rise to false ideas (E2p41) (cf. E1p15s[v] [II/59], E1app [II/82]).

2.

With these terminological preliminaries out of the way, let me return to my main task, that of establishing the inferential nature of Spinozistic (intellectual) thought. Here is a passage where this conception of thought comes through particularly clearly:

This proposition must be plain to anyone, provided he attends to the fact that the *intellect infers from the given definition of any thing* a number of properties that really do follow necessarily from it (i.e., from the very essence of the thing)... [*Haec propositio unicuique manifesta esse debet si modo ad hoc attendat quod ex data cujuscunque rei definitione plures proprietates intellectus concludit, quae revera ex eadem (hoc est ipsa rei essentia) necessario sequuntur*] (E1p16d, emphasis added)

Note that Spinoza intends the above as a perfectly general claim about how the intellect relates to *any* thing. Presented with an essence – or, more precisely, with the representation of an essence in a “definition” (e.g., E1p8s2) – an intellect proceeds to infer, Spinoza thinks, what *follows from* it. As is often emphasized, for Spinoza to understand a thing is to grasp its essence (and not for example some derivative property

4 Cf. “what the true is, or the intellect” (TIE[68]).

5 But see Steinberg 2018, 191-3. Spinoza also uses the term “intellect” in a nominalized sense to pick out the products of understanding, i.e. collections of true ideas. Thus he talks about substance's “infinite intellect” (e.g. E1p17s, E2p3, E1p32c2), which is the true idea of everything.

of that thing [*Treatise on the Emendation of the Intellect* [95]].⁶ But this grasp of an essence is, I want to suggest here, furthermore *inseparable* from a grasp of its consequences. There is thus a certain type of dynamism, we could say, as well as a certain anti-atomism, proper to thought as Spinoza conceives of it: thought does not come to a rest when it grasps some essence as that essence, but goes on to generate further ideas – ideas of what follows, or is deducible, from the idea of that essence.

Spinoza says elsewhere that “many things” (presumably, properties) “are contained in each thing [*multa, quae continentur in unaquaque re*]” (TIE[63]), and also that there is no thing that does not have *some* effect (E1p34). So an intellectual grasp of the essence of *any* thing will give rise to further, inferentially connected ideas, with each inference unfolding some of what that essence “contains”. Thus for instance, to use Spinoza's own favorite example (e.g. E1p17s [II/62]; E2p49d), understanding a triangle's essence will be inseparable from understanding, inter alia, that from this essence it follows that “its three angles are equal to two right angles”. We can see here at least in part why Spinoza also holds that to understand is also to “act” (E2p43s, E3p59d), i.e. to produce some effect autonomously, without the help of “external” causes (E3def2): understanding is a case of genuine acting because nothing else is required to generate ideas of a triangle's properties other than the idea of its essence.

We are now also in a position to see how reflection on the idea of inference helps illuminate the difference between intellect (reason and intuition) and imagination. Namely, by virtue of the presence of inferential linkages between intellectual ideas – by virtue of what we could call the *systematicity* of such ideas – ideas formed by the active and autonomous power of the intellect will differ from imaginative ideas acquired through sense experience. Insofar as the latter are ideas of bodily modifications partially caused, at various times, by external causes, they are also “disconnected” from one another:

I have distinguished between a true idea and other perceptions, and shown that the fictitious, the false, and the other ideas have their origin in the imagination, i.e., in certain sensations that are fortuitous [*fortuitis*], and (as it were) disconnected [*solutis*]; since they do not arise from the very power of the mind, but from external causes (TIE [84], transl. alt.)

Inference, for Spinoza, can produce genuine understanding because it can ground a property in an essence, by deriving it from that essence. In contrast, if we rely on sense experience alone, we may think of some property of a thing without genuinely understanding it – that is, without knowing how to ground it in, or derive it from, a thing's essence. Hence Spinoza says, the “properties of things are not understood so long as their essences are not known” (TIE[95]).

3.

We can now also perhaps see a little better the significance that *definitions* have within Spinoza's philosophy. There are different ways of thinking about things, and even

6 Throughout the paper I will assume (controversially) a continuity between Spinoza's views in the TIE and *Ethics*.

different ways of thinking about their essences. By E1p34, *some* thing follows from every thing. So some content will be made available to thought if it forms the idea of *any* essence. But a “definition” for Spinoza is a specific manner of presenting a thing's essence as an object to thought: the way that allows us to infer *all* of a thing's properties:

I require a concept, *or* definition, of the thing such that when it is considered alone, without any others conjoined, all the thing's properties can be deduced from it...That this is a necessary requirement of a definition is so plain through itself to the attentive that it does not seem worth taking time to demonstrate it (TIE[95])

Intuitively we might want to say that an idea of God's essence and an idea of a cat's essence will differ in how many other ideas they can give rise to. Spinoza grants such intuitions, and indeed offers a relevant systematic rule: the more *real* something is, the greater the number of possible inferences. Hence his demonstration of E1p16 continues as follows:

the intellect infers from the given definition of any thing a number of properties that really do follow necessarily from it (i.e., from the very essence of the thing); and...it infers more properties the more the definition of the thing expresses reality, i.e., the more reality the essence of the defined thing involves [*eo plures quo plus realitatis rei definitio exprimit hoc est quo plus realitatis rei definitae essentia involvit*]. (E1p16d)

We could gloss the degree of represented (“objective”) reality in terms of an idea's *intensional richness*: the richer, or more complex, the intension of the definition that serves as the ground of the inference – the more is “contained” in the relevant idea – the greater the number of possible inferences (where inferring “more” means either inferring a greater number of properties, or in a greater number of ways – for example, under different attributes [cf. E1p9]).⁷ Thus our ideas of essences of different things will differ in how much thinking they allow us to do, in accordance with their degree of objective reality or intensional richness. The definition of God, implicitly containing all possible realities, allows for the greatest advancement in thought, and so also the greatest emendation of the intellect.

4.

Let me pause here briefly in my exposition to address two worries about the picture of Spinozistic inference as presented thus far.

First, the account seems beset by the following ambiguity. In E1p16d Spinoza talks in terms of inferring *properties* from essences. However, elsewhere what he

⁷ Leibniz suggests a similar link between intension and degree of reality in the *New Essays*: “'Animal' comprises more individuals than 'man' does, but 'man' comprises more ideas or more attributes: one has more instances, the other more degrees of reality; one has the greater extension, the other the greater intension.” (Leibniz 1996, 4.17)

describes as having been inferred are *truths* about properties.⁸ So which is it? Two possible answers come to mind. First of all, we could see Spinoza's talk of inferring properties as a shorthand for a more precise talk of inference of truths about properties. Alternatively, we could explain this shifting between talk about properties and talk about truths about properties by the fact that for Spinoza concepts themselves can have propositional structure:⁹ as he puts it, a “concept, i.e., idea”, is a “connection of subject and predicate” (TIE[62]).

Here is a second worry about Spinoza's picture. As we have seen, Spinoza repeatedly insists on the self-evident nature of his claims. For example, he treats as self-evident the claim that thinking of a thing's essence is inseparable from thinking what that essence implies (E1p16d), and thinking *all* that it implies (TIE[95]). Is this not mere dogmatism on Spinoza's part? Here is one possible line of defense: perhaps on Spinoza's view such insights about the nature of thought are available to us through introspection – in the same way that, he believes, mere acquaintance with our own ideas makes it plain that we sense bodies and can only have ideas of bodies and of ideas (E2ax4-5).

5.

There are two further aspects of Spinozistic inference to which I would like to draw our attention. The following passage, taken from Spinoza's argument for the claim that all things “strive” to persevere in being (E3p6), can serve as an introduction to both:

the definition of any thing affirms, and does not deny, the thing's essence, *or* it posits the thing's essence, and does not take it away. So while I attend only to the thing itself, and not to external causes, I shall not be able to find anything in it which can destroy it, q.e.d. [*definitio enim cujuscunque rei ipsius rei essentiam affirmat sed non negat sive rei essentiam ponit sed non tollit. Dum itaque ad rem ipsam tantum, non autem ad causas externas attendimus, nihil in eadem poterimus invenire quod ipsam possit destruere.*](E3p4)¹⁰

Spinoza's claim here is that if we understand a thing's essence, we will recognize that it is metaphysically impossible for that thing, of its own essential nature, to bring about a self-destructive effect or action – something inconsistent with this thing continuing to be essentially that same thing. This is because it is logically impossible for a thing's essence

8 This is the case with his triangle example: it is a certain truth about the sum of angles that is inferred from the essence. Similarly, what follows from the nature of substance is “God's existence” which is “an eternal truth [*Dei existentiam...aeternam esse veritatem*]” (E1p20c1).

9 I say “can” have to leave room for the possibility that Spinoza allows for simplest concepts that do not have propositional structure. Cf. “the ideas of things that are conceived clearly and distinctly, are either most simple, or composed of most simple ideas, i.e., deduced from most simple ideas” (TIE[68]). (Thanks to Sam Levey for pressing me on this.)

10 Cf. Spinoza's description of the law of inertia: “If, on the other hand, A is supposed to move, then as often as I attend only to A, I shall be able to affirm nothing concerning it except that it moves.” (E2L3c)

to imply its own negation.

I bring this passage into the discussion because, as noted, it spotlights two further features of Spinoza's inferential understanding of thought. The first of these is what we could call the *affirmative* nature of Spinozistic inference.¹¹ This inference is “affirmative” in the sense that its ground (in E3p4, the striver's essence, as stated in a definition) is explicitly conserved or reaffirmed in the inference: the inferred idea of a property does not, even partially, negate or contradict the idea of the essence from which it is deduced. For example, in understanding a triangle, to think of what follows from a triangle's essence does not require us to negate anything of the essence itself. (Think in contrast of the self-negating element in how Hegel conceives of the necessary movement of thought from one concept to another, for example, from “Being” to “Nothing”.)¹²

In the above passage, Spinoza concludes from the logical properties of a definition to metaphysical truths about what effects or actions are metaphysically possible for the thing being defined, given its essential nature. To this extent the passage is a clear display of Spinoza's 'rationalist' faith in the power of mere thought to discover metaphysical truths. This is the second feature of Spinozistic inference illuminated by E3p4: the power of inference to function as a method of *metaphysical discovery*.

In E3p4 inference allows us to discover truths about what effects or actions are metaphysically *possible* for a thing, given its essential nature. But I want to suggest that Spinoza holds an even stronger thesis: in his view, inference can give us a handle not merely on truths about possibles but also on truths about the world as it *actually* is, with all the determinate, “singular, changeable” (TIE[100]) things that occupy it. The TIE explicitly describes inference as a method of apriori “discovery” that allows us to arrive at ideas of individuals corresponding to (“agreeing” with) how these individuals actually are:

so long as we are dealing with Investigation of things, we must never infer [*concludere*] anything from abstractions...[T]he best conclusion will have to be drawn from some particular affirmative essence, *or*, from a true and legitimate definition [*optima conclusio erit depromenda ab essentia aliqua particulari affirmativa, sive a vera et legitima definitione*]. For from universal axioms alone the intellect cannot descend to singulars [*ad singularia descendere*], since axioms extend to infinity, and do not determine the intellect to the contemplation of one singular thing rather than another [*nec intellectum magis ad unum, quam ad aliud singulare contemplandum, determinant*]. So the right way of discovery is to form thoughts from some given definition [*recta inveniendi via est ex data aliqua definitione cogitationes formare*]. (TIE[93-4])

Earlier I described Spinozistic inference as a matter of generating further ideas on the grounds of a thing's definition, drawing out the greater or lesser variety of properties that the essence of this thing “contains”. In the above passage Spinoza describes this inferential process as a way of giving *determinate* objects to thought – ideas of one thing

11 For language of “affirmation”, see e.g. TIE[93]. Thanks to Deborah Brown for discussion of this point.

12 See Hegel 1969.

or property rather than of another. But, according to the passage, these ideas are not merely of determinate things (as opposed to being more general or abstract); they are also true: they are ideas of extant “singulars”.

In short, inference for Spinoza is a matter of providing thought with *true and determinate* contents. It is thus not a matter of purely *formal* relations between ideas, and not even of merely truth-*preserving* relations. Moreover, Spinoza explicitly ties thought's capacity for such truth-tracking precisely to the inferential structure of thought: true ideas, ideas that “agree with” how things actually are in nature, are those ideas that make possible an uninterrupted progress of inference; conversely, the possibility of making inferences is what distinguishes true ideas from false ones:

when the mind attends to a thought—to weigh it, and deduce [*deducat*] from it, in good order, the things legitimately to be deduced from it—if it is false, the mind will uncover the falsity; but if it is true, the mind will continue successfully, without any interruption, to deduce true things from it. This, I say, is required for our purpose. [NS: For our thoughts cannot be determined from any other foundation. (*Nam ex nullo alio fundamento cogitationes nostrae determinari queunt.*)] (TIE[104])

Inference as Spinoza understands it is intrinsically truth-tracking insofar as we can infer only from true ideas, and keep inferring only if the inferred ideas in turn are also true. To return to an earlier idea, this is a further sense in which false ideas are “disconnected” (as are, as we saw earlier, all ideas formed on the basis of sense-experience): false sensory ideas, unlike intellectual ideas, will be disconnected not just on account of their origins in different causal circumstances, as noted above, but also because of their incapacity for inferentially generating further ideas.

It is in the light of this contrast with sense experience that, I suggest, we read the last claim in the above passage, namely Spinoza's assertion that “our thoughts cannot be determined from any other foundation”. The claim here is *not* that there is no other way of giving determinate content to our thoughts. Surely sense experience is also a way of determining our thoughts, albeit less systematically, more disconnectedly. But sense experience, unlike intellectual inference, does not provide thought with a *foundation* or grounding for its determinations. As Spinoza says in the *Ethics*, ideas of bodies we happen to encounter are like conclusions without premises (E2p28d).

6.

But why should only true ideas, not false ones, be able to give rise to further inferences? One may worry that this thesis is simply inconsistent with Spinoza's other epistemological commitments, in particular with E1p34, which as we have seen stipulates that every thing is a cause.¹³ If E1p34 is true, it would seem that even false ideas must give rise to some effects – namely, to further ideas.

¹³ The worry about inconsistency arises with assuming the consistency of Spinoza's commitments across the TIE and the *Ethics*; we could of course also forego that assumption.

There are a couple of ways we could answer this worry.¹⁴ Here is the first, which turns on Spinoza's metaphysics of falsehood. Recall that for Spinoza falsehood has no positive reality of its own. So in metaphysical rigour there can be no such thing as an idea that is *wholly* or simply false. Being nothing, such an 'idea' also could not give rise to anything, on pain of violating the principle that *ex nihilo nihil fit* generally, and Spinoza's aforementioned rule of the proportionality of effects to the reality of the thing (E1p16d) more specifically.¹⁵ If however what we mean by “false ideas” are incomplete composites of true simpler ideas, presumably it is not in the respect in which such composite ideas are false or incomplete that they give rise to inferences (since that respect is again in metaphysical rigour nothing); rather, false ideas in this incomplete-composite sense can give rise to inferences only insofar as they participate in truth, or consist of true simpler ideas. So once again, we arrive at the conclusion that only true ideas sustain inferences.

Here is a second way to answer the worry about the consistency of E1p34 with the inferential infertility of false ideas. We can interpret the latter as the claim that although false ideas (in the incomplete-composite sense) do indeed have further effects (as E1p34 requires), these effects are not *inferences* in the relevant sense. That is, they are not a matter of deriving ideas of effects or properties from ideas of essences. So false ideas will give rise to further ideas, but through other mental mechanisms – for instance, through mere association. Spinoza describes association precisely as a relation of ideas that lacks the kind of *intensional common ground* that is present in, and makes possible, an inferential relation (for example, between the essence of a triangle and the conclusion that the sum of its angles is equal to two right angles):

from the thought of the word *pomum* a Roman will immediately pass to the thought of the fruit *which has no similarity to that articulate sound and nothing in common with it* except that the Body of the same man has often been affected by these two [NS: at the same time], i.e., that the man often heard the word *pomum* while he saw the fruit. (E2p18s, emphasis added)

7.

Let me conclude by relating this discussion of the way inferential relations among ideas bear on these ideas' truth values, to the more familiar way of talking about truth in the context of Spinozistic epistemology, namely in terms of “adequacy”.

To recall, according to Spinoza, all true ideas have the “extrinsic” quality of “agreeing” with their objects; but they also have “intrinsic denominations” that identify them as true without regard for the presence or absence of such agreements (E2def4).¹⁶ Now, it would be natural to gloss “adequacy” as something akin to Cartesian clarity and distinctness. However, in my view at least, Spinoza appears to be generally disinterested in first-personal and phenomenological accounts of thinking; these are overshadowed in his writings by an impersonal, quasi-structural, account of relations of ideas as they are in

¹⁴ My responses to this problem have been greatly helped by discussion with Justin Steinberg.

¹⁵ Not being a *res*, it also would not fall under the scope of E1p34.

¹⁶ For a recent discussion of adequacy see Peterman 2018.

themselves.¹⁷ So whether or not the gloss of “adequacy” as clarity and distinctness turns out to be correct in the end, I want to suggest that at the very least Spinoza also has something else in mind when he introduces the notion, namely the fact that inferential relations are truth-discovering. For following up on the consequences of our ideas is, in his eyes, a way of determining whether these ideas are true precisely by considering them alone, without regard for anything external. Conversely, Spinoza's belief that we can determine the truth or falsity of our ideas on inferential grounds alone can be seen as one reason why he would entertain the possibility of something like “adequacy”, that is, why he would believe that an idea can carry its truth on its sleeve, so to speak. And this inferential criterion of adequacy seems to be a better fit with Spinoza's non-first personal, non-phenomenological methodology than any merely phenomenal criterion of clarity and distinctness.

I want to suggest that focusing on inferential relations among ideas also illuminates the “extrinsic”, or world-facing, side of true ideas. This is because the existence of such inferential linkages makes possible the *correspondence* of thoughts to the formal reality of nature, a reality fundamentally structured by causal relations between the essences of things and their effects. Inferential relations, I suggest, provide the counterpart structure of ideas that allows there to be truth as the “extrinsic agreement” of veridical thought with the world:

from what I have just said, that an idea must agree completely with its formal essence, it is evident that for my mind to reproduce completely the likeness of Nature, it must bring all of its ideas forth from that idea which represents the source and origin of the whole of Nature, so that that idea is also the source of the other ideas. (TIE[42]; cf. TIE[99])

Spinoza holds that ideas are capable of having the “same...order and connection” as the causally related “things” they represent (E2p7). In the *Ethics* he characterizes this counterpart mental order as one of “dependence” among ideas (E2p7d); but in the TIE this dependence is explicitly a causal one: it is a matter of ideas “interacting” with and “producing” other ideas:

the idea is objectively in the same way as its object is really. So if there were something in Nature that did not interact with other things, and if there were an objective essence of that thing which would have to agree completely with its formal essence, then *that objective essence would not interact with other ideas, i.e., I could not infer anything about it.* [Note p: “To interact with other things is to produce, or be produced by, other things”] And conversely, those things that do interact with other things (as everything that exists in Nature does) will be understood, and *their objective essences will also have the same interaction, i.e., other ideas will be deduced from them,* and these again will interact with other ideas... (TIE[41]; emphases added)

¹⁷ See in particular his dismissive account of ordinary self-understanding in 1App (II/78ff). Of course there are some very important exceptions to this general approach, especially E2ax4-5. For a very different take on Spinoza's method see Renz 2011.

In other words, another way inference provides a way of illuminating the Spinozistic notion of “truth” is by fleshing out what it means for ideas – often seen as paradigms of causal inertness – to enter into causal relations, thereby making possibly the mirroring of nature in the mind.

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