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# Aborting the zygote argument

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**Abstract** Alfred Mele's zygote argument for incompatibilism is based on a case involving an agent in a deterministic world whose entire life is planned by someone else. Mele's contention is that Ernie (the agent) is unfree and that normal determined agents are relevantly similar to him with regards to free will. In this paper, I examine four different ways of understanding this argument and then criticize each interpretation. I then extend my criticism to manipulation arguments in general. I conclude that the zygote argument is no threat to compatibilism.

**Keywords** Free will · Moral responsibility · Determinism · Zygote argument · Manipulation argument · Compatibilism · Incompatibilism · Alfred Mele

In the course of presenting an argument for the incompatibility of free will and determinism (an argument that keeps him from endorsing compatibilism), Alfred Mele asks us to consider the following case:

> Diana creates a zygote *Z* in Mary. She combines *Z*'s atoms as she does because she wants a certain event *E* to occur thirty years later. From her knowledge of the state of the universe just prior to her creating *Z* and the laws of nature of her deterministic universe, she deduces that a zygote with precisely *Z*'s constitution located in Mary will develop into an ideally self-controlled agent who, in thirty years, will judge, on the basis of rational deliberation, that it is best to *A* and will *A* on the basis of that judgment, thereby bringing about *E*. If this agent, Ernie, has any unsheddable values at the time, they play no role in motivating his *A*-ing. Thirty years later, Ernie is a mentally healthy, ideally

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> self-controlled person who regularly exercises his powers of self-control and has no relevant compelled or coercively produced attitudes. Furthermore, his beliefs are conducive to informed deliberation about all matters that concern him, and he is a reliable deliberator. So he satisfies a version of my proposed compatibilist sufficient conditions for having freely *A*-ed. (Mele 2006, p. 188, see also Mele 1995, p. 193)

Mele then argues as follows:

1. Because of the way his zygote was produced in his deterministic universe, Ernie is not a free agent and is not morally responsible for anything.
2. Concerning free action and moral responsibility of the beings into whom the zygotes develop, there is no significant difference between the way Ernie's zygote comes to exist and the way any normal human zygote comes to exist in a deterministic universe.
3. So determinism precludes free action and moral responsibility (Mele 2006, p. 189).

In this paper, I shall criticize the above argument.[1] I shall then briefly address how my criticisms of Mele's argument may be extended to manipulation arguments in general.

## 1 Getting clear on premise 1

Premise 1 of the zygote argument states:

1. Because of the way his zygote was produced in his deterministic universe, Ernie is not a free agent and is not morally responsible for anything.

This premise not only asserts that Ernie is not a free and morally responsible agent, but also purports to give us an explanation of why this is (or at least asserts that there *is* such an explanation). Ernie is not free "because of the way his zygote was produced in his deterministic universe". But what is *the* way his zygote is produced? Mele's story specifies various details about how Ernie's zygote is produced, but not all of them are relevant to the claim that Ernie lacks free will. For example, the zygote is produced by a woman named "Diana", and it is produced inside a woman named "Mary". Mele is certainly not claiming that being produced in *this* way is why Ernie is not free. Indeed, such details are not even *part* of the explanation of why he is not free. This suggests, then, that by "the way his zygote is produced", we should consider only those aspects of the way it was produced that are (or may be) explanatorily relevant to Ernie's not being free.

[1] In fact, following a modification Mele makes soon after introducing the argument, I shall understand Diana to have planned *all* of Ernie's actions, not just his *A*-ing. This is to head off at the pass the idea that, if Diana plans only one action of Ernie's, he may still be responsible for his other actions. I shall also understand Ernie to satisfy not only Mele's preferred compatibilist conditions on free will, but any others that have been (or might be) suggested (insofar as they are consistent with the case as described and with each other).

There are three obvious candidate explanations for why Ernie is not free in the above scenario (given that Ernie is indeed not free). The first is that the structure of his zygote and all his following actions are *deterministically caused* by prior events. The second is that Ernie was *manipulated* into performing all his actions by an agent's creating his zygote.[2] The third is a combination of the first two. That is, Eric was *deterministically manipulated* into performing all his actions by an agent's creating his zygote. I take it that these three explanations (or slight variations on them) are only ones on the table.[3]

It is unclear whether Mele intends premise 1 to be read in such a way that we may make explicit what explains Ernie's lack of free will or not. That is, it is unclear which of the following two forms premise 1 takes:

A. Because of a particular aspect, X, of the way his zygote was produced, Ernie is not a free agent and is not morally responsible for anything.
B. Because of *some aspect or other* of the way his zygote was produced, Ernie is not a free agent and is not morally responsible for anything.

If we take premise 1 to be making a claim of form A, and given that there are three possible explanations for Ernie's lack of free will, we may understand premise 1 in one of three ways:

1a. Because the structure of his zygote and all of his actions were deterministically caused, Ernie is not a free agent and is not morally responsible for anything.
1b. Because Ernie was manipulated into performing all of his actions by some agent's creating his zygote, Ernie is not a free agent and is not morally responsible for anything.

[2] I shall, throughout this paper, take it that Diana manipulates Ernie in producing his zygote as she does. This is in part to bring out the similarities between the zygote argument and other so-called manipulation arguments for incompatibilism (such as that in Pereboom 2001). Mele expresses the following worry about using the word "manipulation" in this context:

> Now, strictly speaking, manipulating an X (say, a human being) requires that the X exist at the time of manipulation. So my story about Ernie is not a story about manipulation, and the associated original-design argument I examined is not a manipulation argument. (Mele 2008, pp. 284–285)

(As is apparent, Mele instead refers to his zygote argument as an original-design argument.) I am unsure about Mele's reasons for claiming that Diana does not manipulate Ernie (I personally find no problem with the idea of someone's manipulating a person at a time before that person exists), but if one shares Mele's worry, one may instead talk of Diana's *programming* Ernie to do something, or *designing* him with a particular end in mind. Nothing of substance rides on whether we talk of manipulation, programming or design in Mele's argument.

[3] One could possibly claim that Ernie is not free because his zygote is produced abnormally, but it is not at all obvious why mere abnormality of origin should undermine freedom. In any case, if this is what makes Ernie not free, such a lack of freedom can hardly be uncontroversially extended to agents whose zygotes are produced normally. One could also perhaps claim that what makes Ernie not free is that he is produced in such a fashion as to deny him the ability to do otherwise. This, however, needs further extensive argument, both for the claim that the way Ernie is produced precludes such an ability and for the claim that such an ability is necessary for free will and moral responsibility. Furthermore, if such arguments are provided, Mele's zygote argument is no longer doing any substantial work in establishing incompatibilism.

1c. Because Ernie was deterministically manipulated into performing all of his actions by some agent's creating his zygote, Ernie is not a free agent and is not morally responsible for anything.

If we take premise 1 to be making a claim of form B, and given that there are three possible explanations for Ernie's lack of free will, we may understand premise 1 as appealing to a disjunction of these possible explanations:

1d. Either because the structure of his zygote and all of his actions were deterministically caused or because Ernie was manipulated into performing all of his actions by some agent's creating his zygote or because Ernie was deterministically manipulated into performing all of his actions by some agent's creating his zygote, Ernie is not a free agent and is not morally responsible for anything.

I suggest, then, that Mele's argument should be understood to employ one of the above versions of premise 1. But do any of them provide us with a good argument for incompatibilism when combined with premise 2?

## 2 Premise 1a

This states:

1a. Because the structure of his zygote and all of his actions were deterministically caused, Ernie is not a free agent and is not morally responsible for anything.

This premise, when used in an argument for incompatibilism is quite clearly question-begging. It will be accepted only by those people who are already incompatibilists. Substituting premise 1 with 1a, then, produces an ineffective argument for incompatibilism. Mele says something similar when considering premise 1:

> Incompatibilists who have intuitions about Ernie intuit that he is not a free agent and is not morally responsible for anything. Now if they have that intuition partly because they already believe on independent grounds that determinism precludes free action and moral responsibility, then its value as an *intuition* in this context is called into question. After all, the zygote argument is supposed to use an intuition about Ernie as a step toward the conclusion that incompatibilism is true. (Mele 2006, p. 192)

I conclude, then, that not only does using 1a make the zygote argument question-begging; it is also a bad interpretation of Mele. Furthermore, if we understand premise 1 as 1a, it is no longer clear how Mele's argument counts as (at least something like) a *manipulation argument* (i.e. an argument for incompatibilism that rests on similarities between manipulated/programmed agents and determined agents).

## 3 Premise 1b and premise 1c

Premise 1b states:

1b. Because Ernie was manipulated into performing all of his actions by some agent's creating his zygote, Ernie is not a free agent and is not morally responsible for anything.

This understanding of the premise has more textual support. In particular, Mele says the following in defense of premise 1:

> How might an incompatibilist defend premise 1? One predictable argument for it features the claim that Ernie is "deliberately caused to behave in a certain way in much the same way that designers of robots program the responses of their machines to various stimuli" (Kapitan 2000, p. 90; Mele 2006, p. 189)

Perhaps, then, we are to understand that what is supposed to explain Ernie's lack of free will is that he is manipulated into performing all of his actions. The presence of *manipulation* is what drives a person's intuitions that Ernie is not free (assuming she has such intuitions).

The above quote may also support the idea that by premise 1 Mele means 1c:

1c. Because Ernie was deterministically manipulated into performing all of his actions by some agent's creating his zygote, Ernie is not a free agent and is not morally responsible for anything.

1c says that the fact that Ernie is manipulated *combined with the fact that this occurred in a deterministic universe* is what explains his lack of free will. There is further textual evidence that Mele is appealing to 1c and not 1b. For example, his premise 1 states that Ernie is not free because of "the way his zygote was produced *in his deterministic universe*". This appeal to Ernie's being in a deterministic universe also seems to play an essential role in Mele's defense of premise 2, as we shall see later. This suggests that the fact that Ernie is in a deterministic world plays an essential role in the explanation of why Ernie is not free. As it is perhaps better textually supported, we shall first criticize the version of Mele's argument according to which he is appealing to 1c. We shall then look at the interpretation according to which he is appealing to 1b.

If we interpret Mele as using 1c, there is a clear problem with the zygote argument. Being deterministically manipulated is just one way of being deterministically caused. If we accept the conclusion of the argument (that, if determinism is true, no actions are free because they are all deterministically caused), then it does not matter *how* these actions are deterministically caused—their being deterministically caused is by itself sufficient to render all actions unfree. In particular, it does not matter that they are deterministically caused through manipulation. This being so, if incompatibilism is true 1c is false. In essence, the following two claims conflict:

> What explains Ernie's lack of freedom is that he was deterministically manipulated into performing all his actions.

> What explains Ernie's lack of freedom is that he was deterministically caused to perform all his actions.

If the latter is true, then the former is false (and if the former is true, the latter is false). The former says that Ernie lacks free will because of the *combination* of manipulation and determinism (they work together to render Ernie not free). But the latter says that determinism *alone* is enough to render Ernie not free. Both cannot be true.

This being so, we may ask the following question. Does Ernie lack free will because he is determined, or because of the combination of determinism and manipulation? If a defender of the argument maintains 1c and says that it is the combination of the two that renders Ernie not free, then such a defender must herself deny premise 2. If the combination of manipulation and determinism renders Ernie not free, then determinism alone does *not* render agents not free, meaning that there *is* a significant difference between Ernie's case and the case of normal agents in deterministic worlds. If, on the other hand, a defender of the argument says that determinism alone is sufficient to render Ernie unfree, then she must deny 1c. Ernie lacks freedom simply because his actions are deterministically caused, not because they are deterministically manipulated. Given this, she cannot appeal to 1c in an argument for incompatibilism (as it is false even by her own lights). Either way, the zygote argument (with premise 1 interpreted as 1c) fails.

Someone might say that Ernie's lack of freedom is overdetermined. That is, it turns out that Ernie is unfree both because he is determined *and* because he is manipulated. These factors don't work in combination but rather *independently* of each other to make Ernie not free. Perhaps this is right. If it is, we cannot appeal to 1c as this states that these factors *do* work in combination. Nor can we appeal to determinism as an explanation of Ernie's lack of free will, as this would be question-begging (as we saw when discussing 1a). This leaves us with appealing to mere manipulation. This is exactly what 1b does. Let us, then, assess the 1b version of the zygote argument.

The idea, then, is that Ernie is unfree because he is manipulated since his creation. Furthermore, this manipulation is not significantly different (regarding freedom and responsibility) from causal determinism. Therefore, causal determinism is incompatible with free will. What should we make of this argument? One problem with it is that, if the conclusion is true, Ernie's lack of freedom is explained by the fact that all of his actions are deterministically caused. This being so, we may think that it is *exclusively* explained by this, and that it is therefore not explained by his being manipulated (thus rendering 1b false, and the argument unsound). If one is to show that Ernie's being manipulated is indeed an independent explanation of his lack of freedom, one needs a case in which Ernie is unfree because he is manipulated, but also in which Ernie's actions are *not* deterministically caused. Perhaps the following will suffice[4]:

[4] The following case, as well as being based on the case with which we started, is also highly influenced by Mele's discussion of Derk Pereboom's version of the manipulation argument. Pereboom's "four-case argument", as set out in Pereboom (2001), discusses four cases, some of which involve deterministic manipulation, and one of which involves simply determinism. The cases span from having a highly intrusive form of manipulation to having no manipulation at all. Pereboom claims that we should judge the manipulated agent in each case to be not free. Furthermore, Pereboom claims that what *best explains*

> Diana creates a zygote *Z* in Mary. She combines *Z*'s atoms as she does because she wants the zygote to develop into an agent who performs a certain set of actions over the course of his entire life. From her knowledge of the state of the universe just prior to her creating *Z* and the laws of nature of her *indeterministic* universe, she deduces that a zygote with precisely *Z*'s constitution located in Mary will develop into an ideally self-controlled agent, Ernie. As Ernie lives his life, there is a small chance every few seconds that Ernie is incapacitated due to the way Diana created his zygote. If Ernie is never so incapacitated, then he performs that set of actions that Diana has planned. As it happens, Ernie is never incapacitated and performs all those actions Diana has planned. Furthermore, Ernie satisfies Mele's compatibilist conditions on free agency (and any other reasonable compatibilist conditions, insofar as they are consistent with the case and with each other).

Mele might say that this is a case in which Ernie is intuitively not free and that his lack of freedom can be explained by the fact that he is manipulated since creation. Furthermore, Ernie's lack of freedom cannot be explained by the fact that his actions are causally determined, as his actions are *not* causally determined. The new argument would say, then, that because Ernie (in the above case) is manipulated, he is not free. What's more, his manipulation since creation is not significantly different to an agent's being causally determined. Therefore, incompatibilism is true.

Even accepting that Ernie is not free in the above scenario (which is far from obvious), there are two problems with the above argument. The first is that it is questionable whether Ernie's lack of freedom in such a case really is best explained by the fact that he is manipulated. Perhaps, for example, it is better explained by the fact that Ernie lacks the ability to do otherwise (assuming both that determinism precludes such an ability and that the indeterminism present in such a case does not amount to the ability to do otherwise). I shall not press this difficulty.

The second problem is that it is not at all clear how the manipulation in the above case really *is* relevantly similar to being deterministically caused. How does Mele himself justify premise 2? He says:

> A defense of premise 2 might begin with the question how it can matter for the purposes of freedom and moral responsibility whether, in a deterministic universe, a zygote with *Z*'s exact constitution was produced by a supremely intelligent agent with Diana's effective intentions or instead by blind forces. Imagine a deterministic universe *U** that is a lot like the one at issue, *U*, but in which *Z* comes into being in Mary in the normal way and at the same time. It is conceivable that, in *U**, throughout his life, Ernie does exactly what he does in *U*, down to the smallest detail. Suppose that this is so in *U**. Then, a proponent of the zygote argument might contend that, given the additional facts that, in

Footnote 4 continued
this is that, in effect, such agents are causally determined. We may hence conclude that determined agents are unfree. Mele (2005) devises cases in which Pereboom's manipulated agents' actions are *not* determined and yet they are still intuitively not free. Mele concludes that what best explains the agents' lack of freedom cannot be that they are determined. The following case is in part based on Mele's modifications of Pereboom's cases.

> both universes, Ernie has no say about what causes *Z*, no say about the rest of the universe at that time, and no say about what the laws of nature are, the cross-universe difference in what caused *Z* does not support any cross-universe difference in freedom or moral responsibility. (Mele 2006, p. 190)

Unfortunately, Mele's defense of premise 2 rests heavily on the fact that, in his described case, Ernie exists in a *deterministic* world. In effect, Mele asks us to imagine another deterministic world in which Ernie is produced normally but still does exactly the same things as he does in the original deterministic world. He then claims that this makes (or should make) no difference to our judgements about Ernie's freedom. This is partly justified by the fact that Ernie has no say over the laws of nature or properties of the universe at the time of his creation. In both deterministic universes, these combine to determine Ernie's entire future.

None of this applies, however, to our new argument. In the new case, Ernie is manipulated but his actions are not determined by this manipulation. Thus even though Ernie has no say about the laws of nature, and no say about the universe at the time of his creation, these do not determine what he goes on to do. If the manipulation really explains why Ernie is not free in the new case, it is does so in a substantially different way than does the obtaining of causal determinism (perhaps it does so precisely by making Ernie a tool of some other agent). Thus if we appeal to 1b (and our new case) in formulating the zygote argument, we are not justified in asserting premise 2.

In conclusion, if we use 1b in the zygote argument, we must devise a case (possibly such as the one above) in which the manipulation really does explain, independently of causal determinism, why Ernie is not free. However, once we have done this, we are no longer in a position to insist that Ernie's situation is relevantly similar to a case in which there is no manipulation and in which causal determinism *does* obtain. Thus we cannot conclude that determinism precludes free will. The new zygote argument thus fails.

## 4 Premise 1d

This states:

1d. Either because the structure of his zygote and all of his actions were deterministically caused or because Ernie was manipulated into performing all of his actions by some agent's creating his zygote or because Ernie was deterministically manipulated into performing all of his actions by some agent's creating his zygote, Ernie is not a free agent and is not morally responsible for anything.

We may, if we like, simplify this premise by dropping our potential explanations:

1d. Ernie is not a free agent and is not morally responsible for anything (in the universe Mele describes)

If using 1d in the zygote argument is going to make any progress, 1d cannot be justified by 1a, 1b or 1c. If it were, it would inherit one or more of the problems I have set out above. I suggest, then, that we understand the zygote argument under current discussion as follows. First, we are meant to find 1d simply intuitive, separate from any consideration of determinism or manipulation. Indeed, before considering the matter further, we might naturally be *agnostic* about what explains Ernie's lack of freedom (though we may narrow down the options to those mentioned in 1d). Second, we are then supposed to see (via the second premise) that, in fact, Ernie's situation is no different (with respect to free will) from the situation of normal deterministic agents. Generalizing, we conclude that determinism precludes free will.

This version of the argument is also problematic. First, it leaves us in little hope of defending 1d. We are simply supposed to find it intuitive. In particular, we cannot defend 1d in the manner Mele defends his premise 1 (as quoted above). Second, if we are supposed to find 1d intuitive independently of considerations of manipulation, then manipulation is not essential to the argument. Given this, it should be possible to describe many other cases of determined agents in which this manipulation is missing, or in which it goes awry, and yet it is still intuitive that Ernie is not free. As we shall see, however, such other cases are far less persuasive unless one is already committed to incompatibilism.

Consider, for example, the following cases:

> In some deterministic world, Diana miscalculates how to put Ernie's zygote together. The result is that Ernie becomes an ideal agent who, in general, does *not* lead anything like the life Diana had planned.
>
> In another deterministic world, Diana puts Ernie's zygote together in such a way that he becomes an ideal agent, but his actions are all but impossible to entirely predict except by Diana, and she specifically does not predict what they will be (and nor does she plan out Ernie's life in any way).
>
> In yet another deterministic world, Diana puts Ernie's zygote together with a particular plan in mind for his life. Ernie, an ideal agent, fulfils this plan but only because he discovers that Diana is responsible for his creation, and he feels immensely grateful towards her.
>
> In a final deterministic world, Diana again makes a slight miscalculation in her creation of Ernie, which leads to Ernie's finding out that Diana has planned his life out completely. Ernie, an ideal agent, rebels against this and lives an entirely different life.

It is no surprise that Mele does not appeal to any of the above cases to support incompatibilism. No one except a committed incompatibilist would accept that, in such cases, Ernie lacks freedom. Indeed, it is possible that many people would have the *opposite* intuition about such cases—Ernie is free! This strongly suggests that any intuitions that we have that Ernie is not free in the case Mele describes are highly influenced by the fact that he is successfully and covertly manipulated. As such, we cannot trust that Ernie's case is not significantly different from all other cases of determined agents. Conversely, if we accept premise 2, and consider the above cases as well as Mele's own, we may come to the conclusion that in *all* of

these cases, Ernie is free. It is not important for my purposes which of these tacks we take. Either way, this version of the zygote argument fails.

## 5 Generalizing the point

Indeed, I have argued that the zygote argument fails in *all* its forms. How might we generalize the lesson here? In essence, the problem with manipulation arguments (and original-design arguments) is this. In any case of a deterministically manipulated agent that an incompatibilist may describe, either the manipulation does some work in making the agent unfree, or it does not. If it does *not* do any work in making the agent unfree, then it should be possible to describe other cases of determined agents who are, just as intuitively, unfree (otherwise the worry remains that it *is* the presence of manipulation that does the work). But this does not seem to be the case, as seen above in my descriptions of deterministic *failed* attempts at manipulation.[5]

If the manipulation *does* do some work in making a manipulated agent unfree then it either does so in combination with determinism or it doesn't. If it works in combination with determinism, then determinism alone is insufficient to render agents unfree. If it doesn't work in combination with determinism, then examples of non-deterministically manipulated agents should be compared with examples of normal determined agents to see if these examples are relevantly similar with regard to free will and responsibility. If this is done, however, we see little reason to accept that determinism *is* relevantly similar with regard to free will and responsibility to these indeterministic manipulation cases. Thus a compatibilist (or even an agnostic about compatibilism, like Mele) should not be persuaded by manipulation arguments for incompatibilism.

One notable point about my reply to the zygote argument (and manipulation/original-design arguments in general) is that it is neither a hard-line nor a soft-line response.[6] A hard-line response in effect asserts that deterministically manipulated agents (that satisfy the usual compatibilist conditions on freedom) are free and responsible. A soft-line response attempts to find some difference between such agents and standard determined agents which can explain how the latter are free, while the former are not. My reply takes neither tack. It simply states (for the reasons set out above) that *if* deterministically manipulated agents are unfree, then there is no non-question-begging reason to believe that this lack of freedom transfers to normal determined agents (and, of course, if deterministically

[5] Indeed, it strikes me that such cases may provide the seeds for a positive argument for compatibilism. The rough idea being that, regarding cases in which determined agents heroically overcome their programming and choose to live lives entirely distinct from the ones planned for them, we judge such agents to be free and morally responsible despite their existing in deterministic worlds. The correctness of this judgment alone would suffice for the truth of compatibilism, but we may then attempt (just as proponents of the manipulation argument do) to argue that such agents are not significantly different regarding free will from normal determined agents, thus expanding the type of agents who can be free and determined. Of course, this further step may be prone to problems similar to those I have set out for the zygote argument. Such matters await further work.

[6] Michael McKenna is responsible for these terms (see McKenna 2008).

manipulated agents *are* free, then incompatibilism is straightforwardly false). Compatibilists, then, need not take a stand on whether programmed agents like Ernie are free or not (which does not mean, of course, that they are disallowed from so doing).[7]

There may be manipulation arguments that avoid the problems I have set out for the zygote argument. Still, as far as Mele's case for incompatibilism goes, compatibilists may remain pro-(free)-choice.

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[7] See Fischer (2011) for a nice hard-line response to the zygote argument, in which Fischer argues that the programmed Ernie is free.