

Can Cogency Vanish?

¿Puede desaparecer la cogencia?

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Abstract: This paper considers whether universally—for all (known) rational beings—an argument scheme or pattern can go from being cogent (well-reasoned) to fallacious. This question has previously received little attention, despite the centrality of the concepts of cogency, scheme, and fallaciousness. I argue that cogency has vanished in this way for the following scheme, a common type of impersonal means-end reasoning: *X* is needed as a basic necessity or protection of human lives, therefore, *X* ought to be secured if possible. As it stands (with no further elaboration), this scheme is committed to the assumption that the greater the number of human lives, the better. Although this assumption may have been indisputable previously, it is clearly disputable now. It is a fallacy or non sequitur to make a clearly disputable assumption without providing any justification. Although this topic raises critical issues for practically every discipline, my primary focus is on logical (as opposed to empirical or ethical) aspects of the case, and on implications for practical and theoretical logic. I conclude that the profile of vanishing cogency of the scheme may be unique and is determined by a peculiar combination of contingent universality and changing conditions.

Keywords: Cogency, fallacy, argument scheme, context-dependency, population ethics.

Resumen: Este trabajo considera si universalmente –para todos los seres racionales– un esquema o patrón argumentativo puede cambiar de ser cogente (bien razonado) a falaz. Esta pregunta ha recibido poca atención anteriormente, a pesar de la centralidad de los conceptos de fuerza lógica, esquema y falacia. Sostengo que la cogencia ha desaparecido de esta manera para el siguiente esquema, un tipo común de razonamiento impersonal de medios-fines: se necesita *X* como una necesidad básica o protección de la vida humana, por lo tanto, *X* debe ser asegurado si es posible. Tal como

está (sin más elaboración), este esquema se compromete con la suposición de que cuanto mayor sea el número de vidas humanas, mejor es el caso. Aunque este supuesto puede haber sido indiscutible anteriormente, es claramente discutible ahora. Es un error o incongruencia hacer de una suposición algo que es claramente discutible, sin dar ninguna justificación. A pesar de que este tema plantea cuestiones críticas para prácticamente todas las disciplinas, mi objetivo principal radica en el problema lógico (en oposición a problemas empíricos o éticos), y en las implicaciones para la lógica práctica y teórica. Llego a la conclusión de que el perfil de la desaparición de la cogencia del esquema puede ser único y está determinado por una combinación peculiar de la contingente universalidad y las condiciones cambiantes.

Palabras clave: Cogencia, falacia, esquema argumentativo, contexto-dependencia, ética de poblaciones.

1. Introduction

My question is not whether the cogency of instances of an argument scheme or pattern may vary depending on the specific contexts in which the scheme appears, as is true of, for example, the argument from authority. Rather, I am asking whether universally—for all (known) rational beings—a scheme can go from being cogent (well-reasoned) to fallacious. So far as I can tell, the question has never been asked quite this way in relevant literature before, nor conversely has it been asked whether a scheme can universally go from being fallacious to cogent. This situation seems odd, given the centrality of the concepts of cogency, scheme, and fallaciousness.

Yet the phenomenon does appear to be possible. A case can be made that cogency has vanished for the following scheme, a common type of impersonal means-end reasoning that I will call the “Humanization Argument”:

Humanization Argument

X is needed as a basic necessity or protection of human lives.
Therefore, *X* ought to be secured if possible.

Instantiations abound, for example:

The World Food Program appealed Friday for food aid for Cambodian

flood victims, saying that with the price of rice on the rise, the poorest households face the prospect of not having enough to eat. [<https://www.wfp.org/content/wfp-appeals-food-aid-cambodian-flood-victims>]

The Microsoft founder and philanthropist said five or six new vaccines could be available by the end of the decade and urged pharmaceutical manufacturers to make them affordable for poor countries.

“If donors are generous, we will prevent 4 million deaths by 2015. By 2020, we can prevent 10 million deaths,” Gates, co-chair of the Bill and Melinda Gates Foundation, said. [<http://www.reuters.com/article/2011/05/17/us-gates-idUSTRE74G2D520110517>]

This topic may be unpleasant or uncomfortable to discuss, but since it raises critical issues for practically every discipline, including informal logic, please bear with me. My primary focus will be on how good logically (as opposed to empirically or ethically) the case is that cogency has vanished for the Humanization Argument, and as I think the case is a reasonable one, what implications this has for practical and theoretical logic. Hence, this paper has a *dual purpose*: to evaluate the Humanization Argument and to consider consequences for logic.

If cogency has vanished for the Humanization Argument scheme, then although historical instantiations were always or typically cogent, current instantiations are never cogent—no matter what the instantiation, that is, no matter what the value of the variable *X*.

As indicated, my contrasting example of how cogency normally varies with context—selected for no particular reason other than relative clarity—is the argument from authority, or what Walton, Reed, & Macagno (2008, p. 310) call

ARGUMENT FROM EXPERT OPINION

Major Premise: Source *E* is an expert in subject domain *S* containing proposition *A*.

Minor Premise: *E* asserts that proposition *A* is true (false).

Conclusion: *A* is true (false).

Even given that the premises are true, how good such an inference is will vary considerably with the value of the variables from context to context,

depending on how familiar *E* is with the particular content of proposition *A* and any issues surrounding that content, how honest or trustworthy *E* is, and so on. This applies equally to the past and to the present. There is no case to be made that although historical instantiations of this pattern were always or typically cogent, no current instantiation is cogent.

2. Some Remarks on Cogency and Fallaciousness

Since these terms do not have universally accepted meanings in logic and informal logic, it is necessary to say what I mean by them, and doing this will be to some degree stipulative: I take a *cogent* argument to be any well-reasoned argument and a *fallacious* argument to be any poorly reasoned one. So I understand these terms to have opposite meanings. For me the concepts of cogency and fallaciousness pertain “only to an argument’s reasoning or logic, not also to the truth value of its propositional elements (unlike the technical concept of soundness),” and they pertain to both deductive and nondeductive arguments (Plumer, 1999, p. 43; see also my 2001, e.g., p. 174). On the other hand, a *good* argument is one that is cogent, and all of its propositional elements are true. In short, I take cogency to be the broader notion of proper reasoning as compared to the technical concept of validity. Since for nondeduction the strength of support that the premises provide the conclusion may vary from argument to argument, cogency comes in degrees ranging from (as we say) a ‘perfectly cogent’ argument to a ‘barely cogent’ argument, just as does the seriousness of informal fallaciousness (although generally there will be no need to make use of these degrees in this paper). The cogency-fallaciousness dichotomy can be regarded as exhaustive, since less cogency than ‘barely cogent’ seems to mean that the premises provide the conclusion no support, and hence the argument is fallacious. Perhaps more illuminating, though, is to notice that an argument may be cogent and fallacious (well- and poorly reasoned) at the same time in different respects, for example, a question-begging, deductively valid argument that has its conclusion also as a premise.

Depending on how the constituent notions are explicated, we can agree with Johnson & Blair’s (1977) “well-known and widely accepted RSA criteria for argument cogency: the premises are to be relevant, sufficient, and

acceptable” (Paglieri, 2015, p. 70), if acceptability is clearly distinguished from truth (as in Govier, 2010, p. 108, in contrast to Adler, 2006, p. 225). An argument is fallacious if and only if it does not meet one or more of these criteria, which is not necessarily the same thing as saying that it commits a fallacy—as that term is often used. Unlike fallaciousness, fallacies are quantified over and some even have particular names (e.g., ‘equivocation’). This difference appears to have led some to postulate psychological or statistical requirements—which are eschewed in this paper—in the definition of the notion of fallacy. These tend to be variations on the “seem” element in Copi’s definition of “a fallacy as a type of argument that may seem to be correct but which proves, upon examination, not to be so” (1978, p. 87) or Johnson’s requirement that the type of incorrect reasoning occur “with sufficient frequency in discourse to warrant being baptized” (1987, p. 246).

While the cogency or fallaciousness of deductive reasoning is essentially a matter of its form, this is not the case for nondeduction. As Salmon indicates, nondeductive reasoning is (basically what I call) cogent if “the argument has a correct form, and ... the premises of the argument embody all available relevant evidence” (1973, p. 91). This difference between deduction and nondeduction means that the concepts of cogency and fallaciousness directly apply only to instantiations of a nondeductive form or scheme, and to the scheme itself only by extension if the instances are always or typically cogent or fallacious—as the case may be. As Johnson & Blair say, “with few exceptions [including formal fallacies], the patterns of argument that are liable to be fallacious need not always be so” (2006, p. xv).

It is important to emphasize that (Plumer, 1999, p. 43)

in no case is cogency purely a matter of formal validity. For example, adding the stated conclusion or the contradictory of a stated premise to the stated premises would make any argument formally valid. But the argument would lack cogency insofar as it grossly begs the question or engages in self-contradiction. In order to be fully cogent, it seems an argument must not commit any informal fallacy...

Given this, it is false that “valid arguments remain a subclass of cogent arguments ... valid arguments are always cogent” (Goddu, 2004, p. 31), although valid arguments that commit no informal fallacy are a subclass of cogent arguments. We will return to this point in section 4.

3. The Case that Cogency has Vanished for the Humanization Argument

My case that cogency has vanished for the Humanization Argument has three main steps, (A), (B), and (C), as follows:

(A) As it stands (with no further elaboration), the Humanization Argument is committed to the assumption that the greater the number of human lives, the better.

(B) Although this assumption may have been indisputable previously, it is clearly disputable now.

(C) It is a fallacy or non sequitur to make a clearly disputable assumption without providing any justification.

Regarding step (A), surely the Humanization Argument's conclusion is not (and has never been) adequately supported by its stated premise alone. There is a huge gap, for example, between Gates' saying that millions of human deaths could be prevented by having certain new vaccines, and inferring that donors should be generous, including pharmaceutical manufacturers making them affordable for "poor countries." Without some assumption addressing the gap, the Humanization Argument would flatly exhibit the classic pattern of 'the naturalistic fallacy', wherein an 'ought' is attempted to be directly derived from an 'is', as in "all the vulgar systems of morality" (David Hume, *A Treatise of Human Nature*, III, I, I). So, applying a principle of charity is in order, which means that the Humanization Argument is to be understood as an enthymematic argument making some implicit assumption(s) to fill the gap.

For all the world, the assumption looks to me like *the greater the number of human lives, the better* (or something equivalent). Certainly, this would address (if not fill) the gap. If this were not on the right track, it would not only be harsh, it would be *irrelevant* to object to Gate's argument by questioning whether the world needs 10 million more people. Yet it is not irrelevant.

It is true that for the two instantiations cited in section 1, the stated premise is not cast in terms of increasing the number of human lives generally, but rather in terms of saving lives or preventing deaths in two particular sets of circumstances (the Cambodian flood and vaccine unavailability in certain “poor countries”). But there are two critical things to notice about this. First, in these two typical instantiations of the (unelaborated) Humanization Argument, there is not (even) an intimation of a reason *specific* to the Cambodian case or to the case of unvaccinated people as to why their lives should be saved or their deaths prevented. Nor is there any intimation of a reason why we might be broadly obligated to save human lives or prevent human deaths, let alone an intimation of any *restriction* on this obligation. Therefore, since there is nothing in these arguments that would justify attributing a narrower implicit assumption to them, so far as this goes we are left with the interpretation that these arguments take for granted the vague and general proposition that we are obligated to save human lives or prevent deaths (or something equivalent).¹

Second, saving lives or preventing deaths in such circumstances has the direct and obvious effect of increasing the overall number of human lives (on Earth) from the lower number that there otherwise would be if the value of the variable *X* is not provided or undertaken, other things being equal (*ceteris paribus*). This engenders commitment to the proposition that the greater the number of human lives, the better.

It might be claimed instead that in using the Humanization Argument one need take for granted only that human suffering ought to be reduced or prevented. But even if true, this would imply the same commitment, although it is a small step removed. Reducing or preventing human suffering by providing or undertaking the value of the variable *X*—since do-

¹ The interpretive principle at work here, viz., that given specificity determines the narrowness of the implicit assumption, is defended in some detail in my 1999, section III. In that paper I develop and defend general criteria for determining necessary assumptions of arguments, which would take us too far afield to fully reiterate here. Suffice it to say that I found that in determining such assumptions, one first applies the principle of charity, and only if this indicates that the argument is not irredeemably fallacious does one apply the other criteria, including that a necessary assumption must not be a presupposition of rationality generally or of a premise or the conclusion of the argument.

ing that involves saving lives or preventing deaths—will have the obvious and possibly immediate effect of increasing the number of human lives as compared to what there otherwise would be (*ceteris paribus*). Thus, it still seems that there is commitment to the proposition in question. There is no logical cover for such an obvious consequence since it is largely conceptual or analytic.

There are both similarities and differences between the principle at work here and the idea that logical consequences are substitutable inside the scope of ‘ought’, that is, what is called “the deontic closure principle, according to which we ought to do something whenever our doing it logically follows from our doing something else we ought to do.” Although the deontic closure principle has regularly been defended, it warrants inferences that many regard as paradoxical, such as from ‘you ought to mail the letter’ to ‘you ought to mail the letter or burn it’, and indeed to ‘if you burn the letter, then you do something that you ought to do’ (Kiesewetter, 2015, pp. 924-925; Hansen, 2006, pp. 221-222). However, the relation in the principle I am invoking is *being a direct and obvious effect of, other things being equal*, which is hardly logical entailment. The idea as applied here is that given that we are broadly obligated to save human lives or prevent deaths, we are obligated to increase the number of human lives generally (or: the greater the number of people, the better), since doing the latter will be a direct and obvious effect of doing the former, other things being equal. In theory, the extent to which this *ceteris paribus* clause obtains is dependent on any number of contingencies (so of course the relation cannot be that of logical consequence). But in fact, as almost everyone knows, the world’s human population has been increasing dramatically (some details below), which is a plain indication that other things have been more or less equal.

At this point, the deontologist or Kantian might object as follows: ‘People must be treated as ends-in-themselves, so when I see human suffering, I try to alleviate it; for me, the consequences are strictly irrelevant. Therefore, when I use the Humanization Argument, there is no commitment to any such proposition as the greater the number of human lives, the better’. This extreme deontological orientation could be argued to be ethically ir-

responsible, but it can also be contended that it is argumentatively irresponsible if it is kept hidden. As Johnson & Blair indicate, when necessary, “an arguer ought to expand his or her case out of respect for ... the norms of reasonable belief” (2006, p. xv; cf. Johnson 2000). Thus, unless there is some sort of *elaboration* in the presentation of the Humanization Argument indicating that the assumption in question is being defeated or overridden (or narrowed), I conclude that the argument is committed to that assumption, whether or not the arguer fully intends it. Compare another ‘salvation’ argument scheme, viz., simply declaring ‘Y is a land of purely indigenous culture. Therefore, Y ought to be Christianized if possible’ (as one can imagine was the wont of Isabella or Ferdinand, e.g.). Willy nilly, there is commitment to the assumption that the greater the number of Christians, the better, or that Christianization is a good thing.

Regarding step (B), the assumption—the greater the number of human lives, the better—may have been indisputable, for example, in 1690, when John Locke indicated that “the wild woods and uncultivated waste of America” should be populated (*Two Treatises of Government*, II, 5, 37). But conditions have changed radically since Locke’s time. For purposes of making the case that cogency has vanished for the (unelaborated) Humanization Argument, all that is needed is to show that the assumption in question is now clearly problematic or disputable, not that it is *disproven*. This is directly a matter of its epistemic status (or if you like, its “acceptability”), not its truth value.

It is hard to see how any aware person could deny that the assumption has this problematic character in the face of overwhelming evidence to the contrary. Very briefly, should anyone need reminding, this evidence consists of facts such as the following: There has been a ten-fold, exponential increase in the world’s human population since Locke’s time. Carbon dioxide emissions into the atmosphere from human artifices have correspondingly but more dramatically increased, as exhibited in Figure 1.

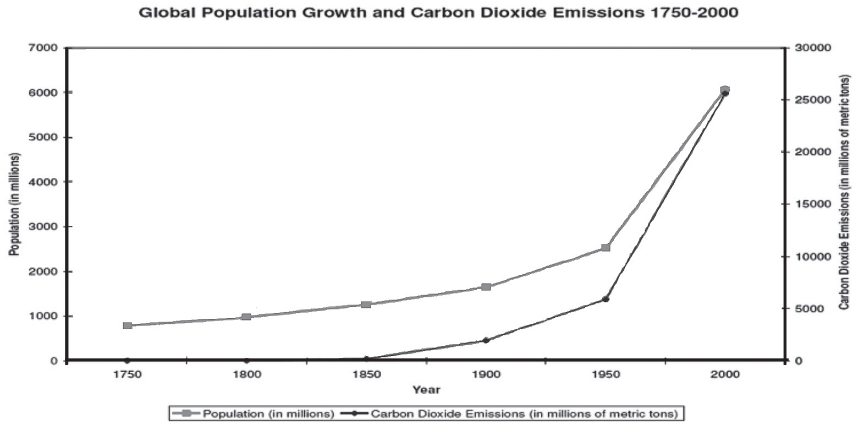


Figure 1.

Source: <https://www.worldof7billion.org/wp-content/uploads/2014/08/generating-heat.pdf>

The US National Aeronautics and Space Administration (NASA), one of many governmental agencies notoriously subject to political pressure to be conservative, says “for 650,000 years, atmospheric CO₂ has never been above” 300 parts per million (ppm)—until 1950, that is; and “in 2013, CO₂ levels surpassed 400 ppm.” In addition, NASA says “If fossil-fuel burning continues at a business-as-usual rate, such that humanity exhausts the reserves over the next few centuries, CO₂ will continue to rise to levels of order of 1500 ppm. The atmosphere would then not return to pre-industrial levels even tens of thousands of years into the future” [http://climate.nasa.gov/climate_resources/24/]. Aside from being a greenhouse gas, there is even evidence that increasing levels of atmospheric CO₂ are contributing to the obesity epidemic (Hersoug, Sjödin, & Astrup, 2012).

From the 21 July 2015 US Public Broadcasting System (PBS) documentary *Humanity from Space* [<http://www.pbs.org/program/humanity-from-space/>]: Currently, “to feed us takes almost half of the land on the planet,” which is “pretty much all of the arable land in the world We’re going to build more cities in the next 40 years than we built in all of human history Our energy needs are predicted to double by 2050.” Some of this energy is provided by (bird-slicing) wind-turbine farms, as well as by (bird-incinerating) solar power stations, such as the world’s largest at Ivanpah,

California, which radically altered 4,000 acres of natural landscape in order to provide power to a mere “140,000 homes.” Of the world’s population of “7.3 billion as of July 2015 ... worldwide coastal flooding threatens to invade up to a billion people by 2050.”

Madness? Perhaps. At this juncture it might be useful to recall Paul R. Ehrlich’s notorious (1968) predictions that there would be mass human starvation in the 1970s and 1980s due to overpopulation, including 65 million in the United States, and that there was a good chance that “England will not exist in the year 2000.” This serves to underscore the earlier point that all that is needed is to show that the assumption—the greater the number of human lives, the better—is now clearly problematic or disputable, not that it is disproven. What may be the most mature view on such matters is expressed by the distinguished anthropologist Joseph A. Tainter (2006, p. 72):

Neoclassical economists assume that, with incentives and unfettered markets, there will always be new technologies and new resources. Humanity, in this view, need never face a crisis of overpopulation or overconsumption. The contrary view is well known: We must reduce our ecological footprint or eventually collapse. The neoclassical argument is based on faith that markets will always work and denial of diminishing returns to innovation... Should we base our future on faith and denial, or on rational planning?

Of course from factual considerations alone, one cannot directly reason either for or against the value proposition/assumption that the greater the number of human lives, the better. One needs an ethical theory, at least operating in the background, or else the naturalistic fallacy is committed. So let us briefly consider in this connection what is perhaps the most widely accepted ethical theory. It advocates ‘the greatest good for the greatest number’, i.e., that good should be maximized in the world and distributed as widely as possible (this is a utilitarian consequentialist theory mixed with a deontological principle—that of distributive justice). Typically, ‘good’ here is defined as pleasure or happiness, and the claim underpinning the assumption in question would be that the more people there are, the greater the net amount and distribution of pleasure or happiness there is in the world. The foregoing considerations do apply directly to this claim.

The claim may have been indisputable in previous times, but not now, given facts on the order of those cited. A reasonable case (at least) could be made that currently and for the foreseeable future, the more people there are, the greater is the balance and distribution of human (not to mention, animal) *suffering* over pleasure or happiness. And a reasonable case is all that is needed to show that the assumption in question is clearly disputable now. The issue here of course revolves around what Parfit (1984) famously called “the Repugnant Conclusion” of utilitarianism, i.e., that we are morally obliged to create more people—up to a point.

Another possible underpinning from ethics and value theory for the assumption would be something like the claim that human lives themselves have intrinsic value (instead of or in addition to pleasure or happiness), so the more people there are, the more intrinsic value there is in the world. The difficulty here is finding any support for the idea that sheer greater number is a good thing, without appeal to religious constructions such as souls—and even there, it is unclear why *many* would be intrinsically better than *some* (especially if each has ‘infinite’ value). The same applies to minds, although of course and up to a point, harnessing more minds tends to be better than fewer in the instrumental achievement of many ends. Often, knowledge—in the Popperian sense of objective knowledge that can reside in books, computer drives, etc. (Popper, 1972)—and beauty (natural and artificial) are plausibly said to be intrinsic values. With more or less the same resources distributed among fewer people, almost everyone might have a chance to significantly contribute to knowledge. And unquestionably, natural beauty has been under assault in proportion to human population levels, where “pretty much all of the arable land in the world” now being under cultivation is just one example. *Diversity* of life is another plausible candidate for being an intrinsic value, yet this is hardly the same thing as sheer amount of life (of a single species). Sometimes autonomy or freedom is held to be an intrinsic value, but this appears either to cut no (melting) ice one way or the other since the absolute amount of autonomy in the world is not relevant, or it is a confused expression of the Kantian point that rationality requires that any given person be treated with respect or as an end in him- or herself (not that the greater the number of ends-in-themselves in the world, the better).

The view most strongly suggested by this—admittedly whirlwind—con-

sideration of intrinsic value is one of balance, and abandonment of the self-serving notion that humanity is the source and locus of all such value.

The last step in the case that cogency has vanished for the Humanization Argument is (C), viz., that it is a fallacy or non sequitur to make a clearly disputable assumption without providing any justification. To make an implicit assumption in an argument is to take the proposition for granted. It might be a rare argument where this is not done. However, the negative sense of argumentative ‘taking for granted’ arises when, as in the Humanization Argument, the proposition is in fact *not granted* in that it is clearly problematic or disputable. Then making the assumption without providing any justification, as in the (unelaborated) Humanization Argument, renders the argument fallacious. I do not think that this is controversial theory. As Hansen says, “we have been aware all along that an argument is a weak one if it has a problematic undefended premise” (2003, p. 2; cf., e.g., Finocchiaro’s 1987 discussion of “presuppositional fallaciousness,” esp. p. 269, and Macagno & Damele, 2013, p. 363: “Why is it not possible to take... an unacceptable premise for granted?”). On the USA-produced Law School Admission Test (LSAT), ‘taking for granted’ or ‘presuming without providing justification’ constitute one established category of reasoning flaw (identified as such by question stems) that examinees are required to spot, and test preparation companies attempt to tutor this skill (e.g., Manhattan Prep: <https://www.manhattanprep.com/lsat/blog/2012/05/09/the-morbid-flaws/>). Again, this is a matter of the assumption’s epistemic status, not its truth value; it concerns what authors mean or should mean by “acceptability” of premises in the RSA criteria for argument cogency. Having a false assumption makes for a *bad* argument; having an undefended assumption that is very possibly or probably false in view of the evidence at hand makes for a *fallacious* argument.

Nevertheless, controversy has arisen when such points are cast as follows, for example: “there is actually in some sense a failure of argumentative responsibility ... if the arguer does not respond to objections that have been voiced, or even to objections that might reasonably be anticipated, given the expressed alternative views on the issue in question” (Johnson & Blair, 2006, p. xv; cf. Johnson, 2000). For, where will this end? As Govier urges (1999, Ch. 13), this looks like devolution into an infinite regress of “dialectical tiers” of responses to objections, responses to objections to

those first responses, responses to objections to those second responses, and so on. Yet we can't have a responsibility or be obligated to do what is impossible.

As indicated, this problem arises partly because of an unnecessary (in this context) shift in perspective from the more objective or extensional—what makes for a “weak” argument—to the more subjective or intensional—“failure” of a person's “argumentative responsibility.” But this is not the whole story. It should come as no revelation that in the formulation of base arguments and equally in the formulation of responses to possible objections to those arguments, *proof must stop somewhere*, at least temporarily, relative to the purposes and circumstances at hand. These are propositions excepted from the burden of proof that allow proof to begin. As Wittgenstein says in *On Certainty* (343), “we just can't investigate everything, and for that reason we are forced to rest content with assumption. If I want the door to turn, the hinges must stay put.” The idea seems to be practically a truism, but in any case, all I am saying here in these terms with respect to the Humanization Argument is that it takes the assumption in question to be such a given, and it is no longer entitled to do that.

4. Implications

So the case that cogency has vanished for the Humanization Argument appears to be a reasonable one. What are the implications of this for practical and theoretical logic?

From the loss of cogency for the Humanization Argument, there are no such dramatic implications as that people should be allowed to starve. Such practices would violate ethical precepts, as can be inferred from preceding discussion, particularly the Kantian strain that people must be treated as ends-in-themselves. Rather, the main practical implication is that one cannot any longer simply offer an instantiation of the Humanization Argument as if it were good reasoning on its own; it needs to be modified with *at least* a hint of how concomitantly human population growth and spread might be reduced, pollution controlled, or natural beauty and diversity of life preserved or restored. That is, there needs to be *at least* a modicum or gesture in the direction of what we saw Tainter call “rational planning.” To be sure,

often this requirement is met by virtue of notions present in the context in which the Humanization Argument appears, as for example when part of the purpose of providing necessity *X* is to help lift people out of poverty to the point where they no longer feel the need to have so many children as a safety net. Perhaps more often, however, the requirement is not met at all. In this regard, one cannot avoid thinking of charities recklessly acting in accordance with the personal whims of their billionaire founders.

Let us consider the implications for theoretical (and mostly informal) logic in connection with two questions: What logically relevant factors have allowed cogency to vanish for the Humanization Argument? And, are there other argument schemes for which cogency has vanished (or materialized, for that matter)?

I think the factor that both allowed cogency to vanish and that indicates there may be no other such argument schemes is the distinctive universality of the relevance of radically changed conditions for the Humanization Argument. These radically changed conditions pertain to all (known) rational beings. The argument scheme accommodates instantiation at any time by anyone, for any sensible value of *X*, and with respect to any general set of human lives (although there are extenuating circumstances wherein it would be counterproductive or even inconsistent to use it, e.g., in wartime with respect to an enemy). But conditions have changed so much on Earth that current instantiations of the (unmodified) scheme are never cogent, even if they are offered by, say, a dwindling Amazonian tribe with respect to themselves—although an addition here about contribution to the diversity of life and a zero-polluting lifestyle would probably be more than sufficient. Conversely, if conditions radically reversed, as with a pandemic of deadly flu, cogency could return to the Humanization Argument.

Contrast the most similar scheme in Walton, et al's large compendium of schemes (2008, p. 334):

ARGUMENT FROM DISTRESS

Premise 1: Individual *x* is in distress (is suffering).

Premise 2: If *y* brings about *A*, it will relieve or help to relieve this distress.

Conclusion: Therefore, *y* ought to bring about *A*.

Unlike the Humanization Argument, the Argument from Distress concerns relations between *individuals* and appears to involve what are called *special ethical obligations*, as between individuals who are “close” in some way (e.g., relatives or friends) or as might be entailed by one’s job. No such implicit assumption or premise as that the greater the number of human lives, the better, is needed to avoid the naturalistic fallacy, etc. Thus, the radically changed circumstances on Earth are of no significant import.

As we saw earlier in section 2, the claim that “valid arguments are always cogent” is false. Indeed, with the assumption in question, the Humanization Argument is basically a deductively *valid* enthymeme. In this respect, then, it cannot be that *non-monotonicity* allowed its cogency to vanish—yet would it not be this very property that means the reasoning is ‘defeasible’ or ‘fragile’? To sort out the answer to this question, consider the following standard definitions (Sainsbury, 1991, p. 369):

Deductive validity is ... *monotonic*. That is, if you start with a deductively valid argument, then, no matter what you *add* to the premises, you will end up with a deductively valid argument. Inductive strength is not monotonic: adding premises to an inductively strong argument can turn it into an inductively weak one.

Applying these definitions, the answer or clarification is that cogency itself is non-monotonic because well-reasoned inductive arguments, in company with all other well-reasoned arguments of any kind (deductive or nondeductive), form proper subsets of cogent arguments. Cogency is non-monotonic in that if you start with a cogent argument, then if you add information to the premises (or add new premises), you may end up with a fallacious argument. The question of whether it is monotonic arises for any consequence relation, and being a consequence relation is a respect in which validity, inductive strength, and cogency are all on par.

Under current conditions indicated above, together with presumed ethical theory, we have been treating the Humanization Argument’s reasoning as having become fallacious or ‘defeated’ because the assumption in question has become clearly disputable. In this way, we have been treating its cogency as context-dependent. Alternatively, and more strictly in line with the preceding clarification, we could add information about current

conditions and their ethical import to the Argument's premise set, in which case you get an argument that is fallacious because it is inconsistent.

What appears to be special about the cogency of the Humanization Argument scheme is that its context-dependency is temporal only; its cogency or fallaciousness is spatially invariant over any place it is instantiated at a given time. Heretofore, I believe the only kind of argument context-dependency directly considered by logicians has been both temporal and spatial, or the absence of any such dependency (validity). Of course, however, philosophically speaking the spatial invariance for the Humanization Argument is a *contingent* fact reflecting both (a) the confinement of humans to Earth (should these bonds be broken, it might be that on other planets, the greater the number of humans lives, the better), and (b) the confinement of rational beings to humans, if we take the essence of a human to be a rational being (if other rational beings existed here or elsewhere, it might be that the greater the number of those beings, the better). Although these contingencies are of little or no consequence for practical logic, they do have the theoretical significance that the spatial invariance of the vanishing cogency of the Humanization Argument is a contingent fact.

Yet it may seem that we can imagine other comparable arguments with a key premise (explicit or implicit) that became, over time, clearly disputable or even known to be false, and whose cogency or fallaciousness is spatially invariant: Shouldn't any scientific revolution or mathematical discovery provide the material? Well, not exactly, so far as I can determine. It appears that there are at least two kinds of putative cases to consider. The first one or two may be illustrated by the once-common argument that natural selection and evolution do not constitute a viable alternative to creationism because the Earth is only thousands of years old. Such a case in fact appears to be a single argument, historically often repeated, rather than a discernable argument scheme or form (with a variable(s) and instantiations) like the Humanization Argument. In further contrast to the Humanization Argument, in this argument spatial invariance is gained 'on the cheap' if you will; that is, spatial invariance is guaranteed by the appearance in the argument of an essential reference that fixes applicability to a specific place (Earth). Compare this argument scheme: 'The Earth is not warming, so we need not be concerned about probable causal effect Z' (sea-level rise, gla-

ciers melting, changing ocean currents, stronger hurricanes and typhoons, etc.). In addition, the cogency or fallaciousness of this particular scheme may be parasitic upon that of the Humanization Argument (see below).

The other kind of putatively comparable case is nicely illustrated by the Gambler's Fallacy. There is no question that this is a spatially-invariant argument scheme with unlimited possible instantiations, and it has not always been regarded as fallacious. Here is an established nineteenth-century logician endorsing the principle underlying the scheme in his logic textbook (Coppee, 1874, p. 162—cited in Siegel, 1992, p. 33):

Thus, in throwing dice, we cannot be sure that any single face or combination of faces will appear, but if, in very many throws, some particular face has not appeared, the chances of its coming up are stronger and stronger, until they approach very near to certainty. It must come; and as each throw is made and it fails to appear, the certainty of its coming draws nearer and nearer.

The principle underlying the Gambler's Fallacy was once thought to be true, but is now known to be false. The situation is similar with any number of other schemes, for example, a scheme that licenses concluding of two spatially separated events that they are (absolutely) simultaneous. Such a scheme is based on a principle that generally has been abandoned by physicists in favor of Einstein's Special Theory of Relativity (so for purposes of this discussion, I shall assume that the principle of absolute simultaneity is false).

Similar to the assumption in question made by the Humanization Argument, the epistemic status of the principle underlying the Gambler's Fallacy and of the principle of absolute simultaneity changed from being acceptable to being unacceptable, and these changes of epistemic status are all the result of various contingencies. Nevertheless, there is a critical difference, which is that these two principles were always false, including when they were acceptable; indeed, they are timelessly, if not necessarily, false. In contrast, the case can be made that the epistemic status of the assumption—the greater the number of human lives, the better—changed more or less in sync with its truth value: under previous conditions it was acceptable and true, yet under current conditions it is neither. (This is a *façon de parler*. Speaking more precisely, since we want to avoid the view

that the truth value of the same proposition can change over time, we may take an instantiation of the Humanization Argument indexically to refer to conditions at the time of the instantiation, so not only is the cogency of the Humanization Argument temporally context dependent, instantiations at different times make differently indexed versions of the assumption, some true and the others false.) Compare Allen (1998, p. 4): “the general point here is that the case for the acceptability of a premise may at the same time be, at least in part, a case for its truth, despite the fact that acceptability is not the same thing as truth.”

It should not be surprising that there would be synchronicity between epistemic status and truth value here; after all, the evidence for the truth or falsity of the assumption in question tends to be relatively straightforward and accessible: currently, almost everywhere we see expansion of industry and cities, pollution, loss of natural habitat and beauty, species extinction and loss of diversity of life, etc. Such evidence is perhaps orders of magnitude less obscure than the evidence for the relativity of simultaneity of spatially separated events, for example. The more obvious the evidence at hand against an undefended (implicit or explicit) premise, the greater the seriousness of the argument’s fallaciousness.

Thus, the profile of vanishing cogency of the Humanization Argument scheme still looks unique; it is determined by a peculiar combination of contingent universality and changing conditions. It is worth mentioning, though, that doubtless there are other schemes whose cogency or fallaciousness is parasitic upon or a function of that of the Humanization Argument. For instance, imagine a scheme that relies on the assumption that the greater the number of fossil fuel power plants, the better. The cogency of such a scheme basically stands or falls—or rather vanishes—with that of the Humanization Argument.

5. Conclusion

This paper has tried to answer the question of whether universally, an argument scheme can go from being cogent to fallacious, and what that might mean. This question has previously received little attention, despite the centrality of the concepts of cogency, scheme, and fallaciousness. We

saw that the phenomenon does seem possible and real in the case of the Humanization Argument, an argument scheme that raises critical issues for practically every discipline. We saw that the profile of vanishing cogency for this argument scheme may be unique. I am not certain that I fully understand why. For all of these reasons, I do hope that this paper will help to begin a broader discussion of the issues it raises.

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