Technology, Virtue, and the Brave New World

Stephan Kampowski
Pontifical John Paul II Institute for Studies on Marriage and Family
Rome, Italy

Introduction

WITH THE PUBLICATION of Fr. Nicanor Pier Giorgio Austriaco's *Biomedicine and Beatitude: An Introduction to Catholic Bioethics,*[1] the current bioethics debate is enriched with a comprehensive *status quaestionis* that presents a vast panorama of issues, is well-documented, and is generally well-advised in its judgments. The author is trained not only in theology and philosophy but also in biology. As he is treating manifold issues, such as artificial procreation, euthanasia, organ-donation, the brain-death criterion, or the patient-doctor relationship, he steers his readers through difficult terrain, introducing them to all sides of the debate and preparing them for his own takes on the issues, which, but for a few exceptions, seem to be wise ones. The aim of this present contribution is not to write a detailed review of Fr. Austriaco's work but rather to engage in a virtual debate on some of the issues about which to my mind more or other things could have been said. The point here is primarily to invite further thinking.

[1] Nicanor Pier Giorgio Austriaco, O.P., *Biomedicine and Beatitude: An Introduction to Catholic Bioethics* (Washington, DC: The Catholic University of America Press, 2011).

Beatitude and the Two Tiers

Let us begin with a question that is already raised by the title. What is the role of "beatitude" in bioethics? And what is its relation to "*Catholic* bioethics" of which we read in the subtitle? Does Fr. Austriaco want to present bioethical issues from a Catholic perspective, making use of revelation and the Church's magisterium to pronounce truths that are valid for all people, or is it a denominational bioethics that is valid only for believing Catholics who await their final *beatitude* from God? To make things even more complicated, Fr. Austriaco introduces the highly debatable theological idea of the two tiers, speaking of the human person's "natural ultimate end" and his or her "supernatural ultimate end,"[2] thus raising the question as to which of these supposed two ends is served by Catholic bioethics. Maybe *Catholic* bioethics is necessary only for people who aspire to a supernatural end, while those satisfied with their natural end could make do with something less demanding?

But are there really two ends? In *Summa theologiae* I-II, q. 5, a. 4, St. Thomas speaks of two kinds of happiness, one imperfect form, "as can be had in this life," and a perfect form, "which we await after this life" and which is our final end in God. This is evidently not speaking of two "ultimate ends." Admittedly, *ST* I-II, q. 62, a. 1 leaves more room for discussion on this point, albeit a highly likely interpretation of that article would read it in the light of *ST* I-II, q. 5, suggesting that Aquinas is simply taking up again the distinction between imperfect and perfect happiness.

Independent of the question of its possible foundation in St. Thomas, the theory of the two tiers is in itself at least not unproblematic. Apart from straining the limits of language—in common usage, "ultimate" or "final" serves as a superlative that does not allow for things beside it—this notion also makes it difficult to see how Adam "was a figure of Him Who was to come, namely Christ the Lord," and how Christ could be the true human being who "fully reveals man to man himself and makes his supreme calling clear."[3] The proposal of the two tiers is certainly motivated by the laudable concern to keep grace gratuitous. It risks, however, turning grace into something that is simply superadded, like the

[2] Ibid., 30.

[3] Vatican II, *Gaudium et Spes,* §22.

topping on a cake. Why is it so difficult to conceive that to achieve our ultimate destiny we could need something to which we have no legal claim,[4] that is, that we need grace, gratuitous by definition, to reach our *one* final end, which, due to its exaltedness, exceeds the capacities of our nature? There are many other things we absolutely need without having any right to them. These are in fact the best things in life, like love or friendship. These, to be sure, are not supernatural in that they do not exceed the capacities of our nature. And yet, they are both necessary *and* gratuitous. It may be helpful for the debate to try to overcome any overly legalistic mindset. As Fr. Austriaco makes clear in a footnote, he is aware of the debate,[5] but to treat this topic well, independent of his final stance, to our mind he would have needed to say much more on it or leave it out. In any case, this is a point worth further reflection.

ANT or ANT-OAR

Looking at Fr. Austriaco's other recent publications, one notes that he has intervened in a debate on the moral licitness of so-called "altered nuclear transfer" (ANT) or "altered nuclear transfer-oocyte assisted reprogramming" (ANT-OAR),[6] processes which aim at obtaining human pluripotent stem cells from what its supporters call "non-embryonic biological artifacts created by using genetic tricks to manipulate eggs and cells"[7] and what its critics call "disabled embryos."[8] It is not surprising that in a comprehensive introduction to bioethics such as *Biomedicine and Beatitude*, these procedures find mention. While in his other publications Fr. Austriaco is their advocate,[9] it seems that in his book he wants to leave the issue inconclusive, contenting himself with having mentioned the debate itself. Hence he closes the section dedicated to it

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[4] Cf. Robert Spaemann, *Rousseau – Mensch oder Bürger. Das Dilemma der Moderne* (Stuttgart: Klett-Cotta, 2008), 96, who, speaking about the thought of early modern theologians, who, for him, are the inventors of the "*natura pura*," writes: "The idea that the human being could be dependent on something that necessarily has the character of free gift, recedes" (translation my own).

[5] Cf. Austriaco, *Biomedicine,* 30n51.

[6] Cf. Nicanor Pier Giorgio Austriaco, "Altered Nuclear Transfer: A Critique of a Critique," *Communio* 32 (2005): 172–76.

[7] Austriaco, *Biomedicine,* 240.

[8] Ibid.

[9] Cf. Austriaco, "Altered Nuclear Transfer."

by simply saying, "these proposals remain controversial,"[10] adding also a prudential reason that speaks against them, independent of the ontological status of the beings created by them: "There are added concerns," he writes, "that procuring the large numbers of human eggs needed to accomplish this proposal could lead to the commercialization of human reproductive tissue and the exploitation of women, especially poor women, in the developing world."[11]

And yet he prejudges the issue here in a way that is perhaps more subtle and thus perhaps even more forceful than if had he taken the position more openly. He does so by the matter of fact way in which he calls the products of ANT or ANT-OAR "non-embryonic biological artifacts,"[12] which is precisely what is under discussion and strongly denied by his interlocutors, such as Adrian Walker, who makes the case that what is produced is precisely a human *embryo,* no matter how defective it has become due to genetic manipulation.[13] In any case, the question of ANT or ANT-OAR invites further reflection.

Conscience and Ignorance

Most of the time, when it comes to classical topics of moral theology, Fr. Austriaco gives highly useful summaries of the classical Catholic position. Occasionally, however, he commits one or another slip of the pen that may cause confusion in people who have not previously studied the subject matter. Thus, his treatment of conscience and ignorance invites a misunderstanding, inasmuch as he suggests that "Hitler and his Nazi associates believed with sure conviction that their actions, some involving the murder of millions of innocent people, were good."[14] Not even by immediately adding, "Their consciences were wrong,"[15] does Fr. Austriaco prevent the reader from getting the impression that what is being proposed here is that the Nazi criminals acted on a good albe-

[10] Austriaco, *Biomedicine,* 240.

[11] Ibid.

[12] Ibid.

[13] Cf. Adrian J. Walker, "The Primacy of the Organism: A Response to Nicanor Austriaco," *Communio* 32 (2005): 178–87.

[14] Austriaco, *Biomedicine,* 36.

[15] Ibid.

it erring conscience. If this were true, not a single person should have been convicted at the Nuremberg trials.

Fr. Austriaco goes on to explain that "[o]ften an erroneous conscience can be traced to ignorance of the moral order, the order of right and wrong,"[16] which sometimes can be attributed to the person's responsibility and sometimes not. In the first case there is guilt, in the latter not. In my judgment, our author's discussion would have benefitted from a treatment of the first principles of the natural law, which according to Aquinas "can nowise be blotted out from men's hearts."[17] This is not to deny that ignorance of some very fundamental principles of the natural moral law presents a grave problem. Thus, St. Thomas himself refers to Caesar's *De Bello Gallico,* where we learn that formerly the Germans did not think that stealing was wrong.[18] Hence, it seems that a very fundamental ignorance is possible and the question of how it comes about and to what extent it excuses from guilt is a very difficult one.

At the same time, we are safe to say that this phenomenon, which with Dietrich von Hildebrand we may call "value blindness," is most often the result of prior sin, so that in some ways it is the effect of *making oneself blind*.[19] And while it is to some extent possible to imagine a primitive tribal society that has not developed a notion of property and hence has no objection to what a more cultivated Roman like Julius Caesar would call "theft," it is completely implausible that these very tribes or their descendants some two thousand years later would simply not consider murder wrong. To our mind, the fact that life is a good and has to be respected, and that hence murder is evil, belongs to the first

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[16] Ibid., 37.

[17] Thomas Aquinas, *ST* I-II, q. 94, a. 6.

[18] Cf. ibid., a. 4.

[19] Cf. D. von Hildebrand, *Ethics*, new ed. (Chicago: Franciscan Herald Press, 1972), 48-49: "Value blindness indeed plays a great role as a root of moral evil, and is in fact at the basis of many preferences of a lower in place of a higher good. . . . But how can we account for such a value blindness? If it were a blindness like color blindness, the result of a mere natural disposition, no one would be responsible for being value blind and for acting in a morally wrong way because of this blindness. But it is not the kind of ignorance which makes an action involuntary. Value blindness is in no way the result of mere temperamental disposition, but rather of pride and concupiscence. Because here a point of view other than the value dominates the approach to reality; the point of view, namely of what satisfies our pride and concupiscence: we are therefore blinded to certain values."

principles of the natural moral law which precisely cannot be "blotted out from men's hearts." Thus no one can legitimately claim ignorance of the moral law as an excuse for murder, claiming that he or she did not know that someone else's life was a good that needed to be respected. *Everyone* can in principle know that murder is wrong. If in a particular instance, for instance under the influence of the passions, someone does not know, then this ignorance is necessarily *culpable* ignorance, an ignorance for which the person him- or herself is responsible and which is the result of prior sin.[20] According to Hannah Arendt's observations, even Adolf Eichmann had a conscience, at least in the beginning of his tenure as director of the logistics of the Holocaust. Only after he had acted against his conscience a number of times did it "[begin] to function the other way around."[21] *Biomedicine and Beatitude* thus invites additional thought on the question of conscience and the natural law.

AIDS and Condoms

Ever since Martin Rhonheimer's provocative article "The Truth about Condoms," published in *The Tablet* in July 2004,[22] there has been a fervent and ongoing debate on whether it could ever be morally licit for two spouses, one of whom is HIV-positive, to have recourse to condoms so as to reduce the risk of infection on the part of the not-infected spouse during the act of intercourse. The purpose of treating this topic is not to defend the use of condoms in the case just described. In fact, while duly noting that as of the time of this writing the Church's Magisterium has not yet pronounced on the issue, we personally do not think the use of condoms is admissible here. The point is rather to seek precision in defining the moral object of an act. The definition given of the moral object in John Paul II's encyclical letter *Veritatis Splendor* §78

[20] Cf. *ST* I-II, q. 94, a. 6, ad 1: "Sin blots out the law of nature in particular cases, not universally, except perchance in regard to the secondary precepts of the natural law."

[21] Cf. Hannah Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil* (New York: Penguin Books, 1977), 95: "Thus, we are perhaps in a position to answer Judge Landau's question—the question uppermost in the minds of nearly everyone who followed the trial—of whether the accused had a conscience: yes, he had a conscience, and his conscience functioned in the expected way for about four weeks, whereupon it began to function the other way around."

[22] Martin Rhonheimer, "The Truth about Condoms," *The Tablet* (July 10, 2004): 10–11.

reads as follows: "In order to be able to grasp the object of an act which specifies that act morally, it is therefore necessary to place oneself *in the perspective of the acting person*. The object of the act of willing is in fact a freely chosen kind of behaviour. …[The] object is the proximate end of a deliberate decision which determines the act of willing on the part of the acting person." Now, on this view of the moral object, which asks about what is deliberately chosen by the acting person, Martin Rhonheimer's contention that spouses in the scenario under discussion are not strictly speaking *contracepting* when they resort to the use of condoms is not completely implausible. From this, however, it does not in any way follow that what they are doing is morally licit. There are in fact many sexual practices that are not contraceptive but nonetheless immoral. We will now try to explain ourselves in more detail.

Following the formulation of *Humanae Vitae* §14,[23] Fr. Austriaco gives a definition of the contraceptive act that includes the level of intention. We read: "A contraceptive act is every action that, whether in anticipation of a *freely* chosen sexual act or in its accomplishment, proposes, whether as an end or as a means, to render procreation impossible."[24] Consistent with this definition, Fr. Austriaco himself can think of a case where condomic intercourse is *not* contraceptive. It is a scenario that is difficult to imagine—at least with regard to condom use—and yet it works to make the case: "If a rape victim chooses to use a condom, a diaphragm, or a spermicidal jelly, she would not be contracepting because here she is not choosing to sterilize a freely chosen sexual act."[25] Thus we see that Fr. Austriaco has included in the definition of a contraceptive act the intention of the partners to render sterile a freely chosen sexual

[23] Pope Paul VI, *Humanae Vitae,* §14: "Similarly excluded is any action which either before, at the moment of, or after sexual intercourse, is specifically intended to prevent procreation—whether as an end or as a means."

[24] Austriaco, *Biomedicine,* 95. This definition is lacking the third possible group of actions mentioned by *Humanae Vitae,* i.e., those actions that take place *after* the sexual act (cf. *HV* §14). A woman who, after having had sexual relations, washes her vagina in the hope of impeding conception is by that fact performing a contraceptive act. But this is not the main point here. The point is rather that it is impossible to describe a contraceptive act as a human act without including the contraceptive *intent*. Evidently, for a woman to wash herself shortly after sexual relations is not inherently contraceptive.

[25] Ibid., 95.

act. In fact, for a woman to take the hormonal pill is no more contraceptive by its very nature than for a man to take a very hot bath or for a man or woman to drink a lot of diet coke. To qualify as contraceptive, these acts have to be undertaken in view of rendering sterile freely chosen sexual acts, and not in view of regulating one's cycle, washing oneself, or quenching one's thirst.

If, along the lines of these reflections, Martin Rhonheimer claims that an action that is not chosen in order to render procreation impossible is not a contraceptive act, one can see his logic. Two spouses, one of whom is HIV-positive, and who in their sexual activity resort to the use of condoms in order to protect the non-infected spouse may actually bemoan the sterility of this act. They may even restrict their sexual encounters to the woman's infertile period. They are not choosing to use a condom to render sterile their freely chosen sexual act, and hence one can appreciate how Rhonheimer wants to conclude that what they are doing cannot be defined as contraception: "A married man who is HIV-infected and uses the condom to protect his wife from infection is not acting to render procreation impossible, but to prevent infection. If conception is prevented, this will be an—unintentional—side-effect and will not therefore shape the moral meaning of the act as a contraceptive act."[26] What to our mind is controversial, then, is not Rhonheimer's claim that condomic intercourse in the case described is not contraceptive. What is controversial is the further conjecture that this behavior could ever be morally licit. Evidently "not-contraceptive" is not a synonym for "morally permissible."

In his essay "Marriage and the Prophylactic Use of Condoms," Luke Gormally responds to Rhonheimer, making the convincing case that only acts of a generative kind can ever qualify as conjugal acts. Much of his article is in fact about a detailed examination of what can and cannot count as "act which is per se apt for generation."[27] Here, many distinctions are in order, such as the one between sterility and impotency and between self-induced sterility and sterility that is not deliberately chosen. He convincingly concludes that condomic intercourse can *never*

[26] Rhonheimer, "Truth about Condoms," 10.

[27] Luke Gormally, "Marriage and the Prophylactic Use of Condoms," *National Catholic Bioethics Quarterly* 5 (2005): 744.

qualify as a generative kind of act. In virtue of its physical structure, one cannot possibly choose it under this description, and hence it can never be a called a conjugal act: "If a husband ejaculates into a condom, his wife is not receiving his ejaculate in her reproductive tract. His chosen act has, therefore, the character of an act from which generation *cannot* follow. That generation cannot follow is not a *per accidens* feature of the act, arising from biological characteristics of the spouses which are extrinsic to the character of the performance as such."[28] As long as there is the barrier of the condom, there cannot be the union in one flesh and therefore there cannot be properly speaking a conjugal act.[29] Hence, we completely agree with Fr. Austriaco when he says, "The physical structure of a human act limits the moral object that can be legitimately chosen to specify it from the perspective of the acting person."[30] Due to its physical structure, condomic intercourse cannot possibly be chosen under the description of "conjugal act," no more than can anal or oral intercourse,[31] or petting, or—to give more remote and innocent examples that no longer even have an outer resemblance of the conjugal act—a handshake, a kiss, or eating with the same utensils. All that we want to suggest, for the sake of terminological accuracy, is that not every act that cannot be chosen as a conjugal act is thereby necessarily chosen as a contraceptive act, which of course does not immediately mean that thereby it is then morally upright. Anal or oral intercourse will not be called contraceptive. However, they clearly do not qualify as conjugal intercourse either, nor do they qualify as morally licit. Hence, even if we wish to say that choosing to make use of a condom during

[28] Ibid., 745.

[29] This is also the judgment of Juan José Pérez-Soba in "L'amore coniugale ai tempi dell'Aids," in *L'Osservatore Romano,* Italian edition (May 25, 2011): 6: "A sexual act accomplished with the condom cannot be considered a fully conjugal act, to the extent to which it has been deliberately deprived of its intrinsic meanings. The condom, with its barrier effect, in some way deforms the realization of the sexual act and not only deprives it of its procreative meaning, impeding fecundation but also destroys the meaning of being 'one flesh' in the sense of the totality of the gift in spousal union" (translation my own).

[30] Austriaco, *Biomedicine,* 92.

[31] In fact, it is with good reason that Gormally compares condomic intercourse to anal intercourse, when he writes, "A condom is as inappropriate a receptacle for the deposition of semen as the anus" (Gormally, "Marriage and the Prophylactic Use of Condoms," 745).

sexual relations so as to protect one's partner against HIV-infection is not contraceptive, since the use of the condom is not chosen *in order to* render the sexual act infertile, nonetheless, the act cannot be said to be a conjugal act, since the man's semen is deposited into an "inappropriate receptacle" as Gormally puts it,[32] and so this act would have to receive a moral evaluation analogous to acts similar to it, such as anal or oral intercourse or mutual masturbation.

Accepting the conclusion that condomic intercourse can never be called a conjugal act and hence that it is always going to be morally reprehensible, is it true, however, that the only way for spouses, one of whom is HIV-positive, is complete abstinence, as Fr. Austriaco suggests? Correctly noticing that not even the use of condoms is 100 percent effective when it comes to protecting the other spouse from the infection, he asks himself what he rightly identifies as *the* crucial question of the whole debate: "What does *love* demand of a husband and a wife when one of them is infected with HIV/AIDS? In other words, would a husband who truly loves his wife ever take the chance of exposing her to a lethal virus?"[33] His answer is quite clearly expressed: "I do not think that a husband who truly loved his wife would ever put her life at risk by having marital relations with her, even with a condom. In the end, therefore, the only truly authentic Christian response to the disputed question over the moral liceity of prophylactic condom use in marriage must be this: Never condoms. Always abstinence."[34]

In what follows we want to raise the question of whether recent advances in the medical sciences bring in new relevant factors for these considerations. What is the meaning of new, highly effective, antiretroviral drugs for married couples affected by HIV? It seems that antiretroviral drugs have by now become so effective that an HIV-infection is no longer a death-sentence. Whereas in the 1980s, when the HIV/AIDS epidemic first erupted, mortality was close to 100 percent at 5 to 10 years after the diagnosis,[35] antiretroviral drugs have by now made a

[32] Ibid.

[33] Austriaco, *Biomedicine,* 93.

[34] Ibid.

[35] Cf. Giuseppe Ippolito et al., "Editorial. AIDS and HIV Infection after Thirty Years," *AIDS Research and Treatment,* vol. 2013, Article ID 731983, 3 pages, 2013 (http://dx.doi.org/10.1155/2013/731983).

great difference. Provided the infection is diagnosed early, HIV can be controlled where medications are available. According to a recent study, due to HIV "7.0 years of life were lost on average," which is, of course, bad enough, and yet "comparable to the effect of cigarette smoking."[36] These advances in treatment will need to be kept in mind when moral theologians and philosophers consider what to counsel spouses who find themselves in the difficult situation where one of them is HIV-positive. We are not suggesting here that there is no problem with risking an infection. All we are saying is that it may make a difference for risk evaluation whether what one risks is death or injury.[37] Here we also need to keep in mind that on the other side of the balance there is not merely the question of the fulfillment of the spouses' sexual urge, but also the question of their being able to form a family or to make their family grow.

The existence of highly effective antiretroviral drugs may affect the debate also in an additional way. It seems that their use on the part of the HIV-positive partner significantly reduces the risk of sexual transmission in serodiscordant couples. The so-called "Swiss Statement," published in 2008 on behalf of the Swiss National AIDS Commission (*Commission fédérale pour les problèmes liés au sida*), goes so far as to make the bold statement that "HIV-positive individuals not suffering from any other STD and adhering to an effective antiretroviral treatment do not transmit HIV sexually."[38] This study has caused a lot of stir in the scientific community and did not go unchallenged.[39] But even if its claims should turn out to be too categorical and in need of some further qualifications,[40] there is no doubt that antiretroviral drug therapy enters as a

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[36] Fumiyo Nakagawa et al., "Projected Life Expectancy of People with HIV according to Timing of Diagnosis," *AIDS* 26 (2012): 335.

[37] And here the question is evidently not whether the infected spouse may risk injuring the non-infected one, but rather whether the non-infected one may licitly expose him- or herself to the danger of infection.

[38] Pietro Vernazza et al., "Les personnes séropositives ne souffrant d'aucune autre MST et suivant un traitement antirétroviral efficace ne transmettent pas le VIH par voie sexuelle," *Bulletin des médecins suisses* 89 (2008): 165–69, here: 165.

[39] Myron S. Cohen, "HIV Treatment as Prevention and 'The Swiss Statement': in for a Dime, in for a Dollar?" *Clinical Infectious Diseases* 51 (2010): 1323-1324.

[40] The authors themselves note that they are *not* claiming that upon antiretroviral drug therapy sexual HIV-transmission becomes literally unthinkable: "La CFS est consciente que d'un point de vue strictement scientifique, les éléments médicaux et biologiques disponibles à l'heure actuelle ne prouvent pas qu'un TAR efficace *empêche*

major factor in the prevention of new infections[41] and hence will figure in when it comes to risk evaluation. I am not saying moral theologians or anyone else should at this point counsel serodiscordant, married and faithful couples who do not suffer from other sexually transmitted diseases to have intimate relations as if nothing had happened and to rely on the effects of antiretroviral drugs. The "Swiss Statement" would suggest that one could, but to my mind it would still be wise to have further research on the matter. What I am suggesting, then, is that moral theologians, or anyone in the situation of having to give advice in this matter, should keep up to date on the promising scientific developments, which *in the future,* once conclusive evidence has been produced, might make the debate on AIDS and condoms obsolete.[42]

Appealing to this data, we want to propose that the debate about whether and how serodiscordant couples can live out their marital intimacy should begin with the question of the morality of risk evaluation, that is, the question of what love demands of couples who find themselves in this situation, an issue that is rightly identified by Fr. Austriaco

toute infection au VIH" (Vernazza et al., "Les personnes séropositives," 165).

[41] According to a ground-breaking 73-million-dollar study conducted by the HIV Prevention Trials Network on "serodiscordant" couples, the infected partner's use of antiretroviral drugs reduces the risk of sexual transmission by 96 percent. Cf. Myron S. Cohen et al., "Prevention of HIV-1 Infection with Early Antiretroviral Therapy," *New England Journal of Medicine* 365 (August 11, 2011): 493–505. This thorough and comprehensive study has also come to be called "HPTN 052" and was named "Breakthrough of the Year" by *Science* magazine. Cf. *Science* 334 (December 23, 2011): 1628. The findings of this study, however, do not allow a direct comparison between the effectiveness of condom use and the effectiveness of antiretroviral drug therapy in avoiding HIV transmission. The research compares two groups of serodiscordant couples: one in which the HIV-positive partner used antiretroviral drugs (=the group in which HIV infection was 96 percent lower) and one in which the HIV-positive partner did not assume them. In both groups, however, condom use was prevalent.

[42] In fact, a recent meta-analysis speaks of "the emerging body of literature expanding on the position put forth by the Swiss National AIDS Commission that unprotected sexual intercourse is a viable conception and sexual option for heterosexual serodiscordant couples in monogamous relationships if the HIV-infected partner has full virologic suppression on cART, where both parties understand the limitations of the available data." Cf. Mona R. Loutfy et al., "Systematic Review of HIV Transmission between Heterosexual Serodiscordant Couples where the HIV-Positive Partner Is Fully Suppressed on Antiretroviral Therapy," *PLoS ONE* 8/2 (2013): e55747 (http://www.plosone.org/article/info:doi/10.1371/journal.pone.0055747).

as "the most important question in this debate."[43] Antiretroviral drugs significantly lower the risk of HIV infection through intercourse without completely eliminating it. Here they are like condoms, but unlike condoms, they do not prevent the couple from engaging in authentic conjugal acts. They also significantly lower the risk of dying from an HIV-infection. Could it ever be morally permissible for spouses to run any risk, no matter how small, of infecting each other? Could this risk ever be weighed against the good of children or the good of spousal intimacy? This seems to be the issue around which the debate should turn, taking for granted the moral urgency of making these medications universally available.

Technology and Virtue

Let us now turn to a reflection on the relation between technology and virtue. Fr. Austriaco professes to place an emphasis on virtue throughout his book and seeks to be true to this emphasis when it comes to the question of performance-enhancing drugs. He is aware of the concerns raised by the President's Council on Bioethics as expressed in its report *Beyond Therapy,* aptly summarizing them in this way: "Drugs used to enhance human function could lead to unfairness and inequality, to overt and subtle social coercion and constraint, to detrimental side effects that would undermine the individual's health and well-being, and most significantly, to the distortion of true dignity of excellent human activity."[44] What is truly surprising is that Fr. Austriaco then proceeds to balance the considerations proposed by the Council—considerations which to a large extent are based on the question of the meaning of human activity and excellence or virtue—precisely by a reference to virtue ethics: "In light of our emphasis on virtue in bioethics, however, I also suggest that we could address the moral concerns raised by cognitive enhancers—and other biotechnological interventions that could enhance human function—by asking the following question: would use of these cognitive enhancers allow the human agent to grow in virtue and human excellence?"[45] The Council's response to this question in *Beyond*

[43] Austriaco, *Biomedicine,* 93.

[44] Ibid., 224.

[45] Ibid.

Therapy would clearly have been "no," and that precisely in the light of what one may call a virtue ethics, the main argument in point being that biotechnological enhancement risks substituting itself for virtue, providing an easy shortcut to obtain excellent results without having to develop excellent dispositions.[46] Fr. Austriaco, by contrast, seems to suggest that in some cases, taking performance-enhancing drugs may actually increase virtue when he writes: "In some scenarios, the use of these psychoactive drugs could help the human agent to better attain the end of his vocation in the service of the common good without harmful side effects. For instance, taking cognitive enhancers to help an air traffic controller to more accurately and efficiently keep track of airplanes would be laudable. It would make the individual a more excellent professional."[47]

To our mind, these last affirmations bear some further reflection. First of all, to approach this issue, it may be good to recall some of the reasons why we are fighting so hard against doping in sports and academics. Why not legalize performance-enhancing drugs *tout court* and allow Lance Armstrong to keep his *Tour de France* titles? There is, of course, first of all the question of health. It does seem to be a fact of experience that every drug that actually has effects also has side effects. The side effects of performance-enhancing drugs like steroids have been well documented.[48] There is furthermore the risk of negative long-term effects that are not immediately measurable and obvious. The existence of effective drugs that enhance performance of any kind "without any harmful effects"[49] is entirely theoretical. The idea is not contradictory in itself, but in the real world such substances are hard to come by,[50] and we

[46] Cf. The President's Council on Bioethics, *Beyond Therapy: Biotechnology and the Pursuit of Happiness* (New York: ReganBooks, 2003): 141: "What is at stake here is the very meaning of human agency, the meaning of being *at-work* in the world, being at-work *myself,* and being at-work in a *humanly excellent* way."

[47] Austriaco, *Biomedicine,* 224.

[48] Cf. President's Council, *Beyond Therapy,* 137: "With drugs like steroids, the grave long-term health risks are well known: they include, among others, liver tumors, fluid retention, high blood pressure, infertility, premature cessation of growth in adolescents, and psychological effects from excessive mood swings to drug dependence."

[49] Austriaco, *Biomedicine,* 224.

[50] The President's Council expresses itself in this way: "With looming biotechnical

have every reason to believe that these will never actually exist. A general legalization of performance-enhancing drugs in sports would put an even greater pressure on athletes to make use of them than is the case already today. Whoever wanted to be competitive would have to make use of them. To be a competitive athlete, then, would mean to be obliged to risk ruining one's health. The ban on performance-enhancing drugs is first and foremost at the service of the athlete's health.

As the President's Council's report *Beyond Therapy* quite rightly points out, however, there is still another reason for the ban on doping in sports. The argument is perhaps a little less tangible than the one from health, but nonetheless it has a convincing force. It regards the question of how much the athletes' activity can still be called their own, once they are using performance-enhancing drugs.[51] This is now truly an argument from virtue. Use of these substances puts athletes in danger of being alienated from their activities. We are so disappointed about the manipulations that went on at the *Tour de France* because we admire the athletes' human performance as the result of natural endowment, serious training, and intelligent strategy, while in fact it now appears that the athlete with the best pharmacist has won.

The Council convincingly argues that athletic competition is not simply about being the fastest and strongest absolutely speaking, but about being the fastest and strongest as a human being and not as a cyborg.[52] All of us can be as fast as a *Tour de France* cyclist: we just have to get on a motorbike. But then, obviously, the speed is no longer the

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powers like genetic muscle enhancement, the side effects are for now uncertain. But until proven otherwise, it makes sense to follow this prudent maxim: No biological agent powerful enough to achieve major changes in body or mind is likely to be entirely safe or without side effects."

[51] Cf. *Beyond Therapy,* 129: "*[O]n the plane of human experience and understanding,* there is a difference between changes in our bodies that proceed through self-direction and those that do not, and between changes that result from our putting our bodies to work and those that result from having our bodies 'worked on' by others or altered directly." Cf. also ibid., 130: "When we seek superior performance through better training, *the way our body works* and our experience and understanding of *our own body at work* are more closely aligned. With interventions that bypass human experience to work their biological 'magic' directly… our silent bodily workings and our conscious agency are more alienated from one another."

[52] Cf. *Beyond Therapy,* 142: "[I]t is not simply the separable, measurable, and comparable *result* that makes a performance excellent—but *who* is performing and *how.*"

result of our performance but rather the motorbike's. Doping is analogous. It is evidently more sophisticated, but there is a real way in which the principle of the performance is no longer in the human being, but in something else: a technique that takes the form of drugs or similar aids. In sports it is human excellence we wish to see and admire: virtue and not technology.

Now in the case of air traffic controllers, one may say that what is at stake is not the possibility of being able to admire them. What matters is that they perform their job well to ensure the safety of air travelers. It seems that here only the first argument against performance-enhancing drugs can count: the question of health. If one were able to make sure that drugs with no or minimal side effects can be administered, then it seems that these indeed should be used by air traffic controllers, policemen, soldiers, truck drivers and all people who need to be alert as they are performing their job, so as to increase public safety. We immediately see that the logic by which one proposes the administration of performance-enhancing drugs to air traffic controllers applies to many other groups of possible recipients. Why only air traffic controllers? There are many people who perform jobs of great responsibility. If we begin with some groups of people, the use of these drugs inevitably will become universal in the long run. We are not saying this because we believe we have prophetic powers. We are basing our assertion simply on the fact that there is no inherent criterion to stop short of universal administration once one starts with some people. Thus we have to ask ourselves whether we could want the use of performance-enhancing drugs to be the law of the land.

If our conviction is that we couldn't, that will largely be for the same two reasons for why we regard doping as wrong. And these reasons count for society as a whole just as much as they count for each individual. In philosophical discourse one may imagine indeed a world in which performance-enhancing drugs do not have any side effects. As we have just said above, in the real world in which we live, however, it is practically unthinkable that there should be highly effective drugs without any negative side effects. Is it morally licit to ask a certain group of professionals, such as air traffic controllers, to risk and ruin their health for the sake of their job? This could hardly be so. And thinking of society at large, could we really want a society composed of Jason Bournes,

highly effectively drilled and technologically shaped for a certain task at the highest human cost, not even to speak of constant headaches?

But, for the sake of the argument, let us for a moment enter into the ivory tower of philosophy and grant the counter-factual assumption of a highly effective drug or technique without unwanted side effects. What could be wrong with administering innocuous performance-enhancing drugs to air traffic controllers and a few other well circumscribed groups of people? The brief answer is: a whole lot. It would mean asking a whole professional group to abdicate their humanity in order to be allowed to exercise their profession. It would mean to ask of them that their job performance be no longer the result of their own excellence or virtue but rather the result of a pill. To be an air traffic controller certainly carries with it a weight of responsibility. And persons engaged in this profession can correspond to this responsibility in many human ways, some as simple as making sure to get enough sleep when they are not on the job, others perhaps a little more demanding, such as watching one's diet or making sure to keep one's body in shape by getting enough exercise. All this would then be made unnecessary through the use of a drug. Air traffic controllers are then as alienated from their job performance as doping athletes are from their athletic performance. Could it ever be licit to ask people to perform a job in which they are no longer allowed to be human? If the job is so complex that it can no longer be done by one "unenhanced" human being, then maybe it should be broken down, so that it can be done by two or three. What should not be done is to treat human beings as if they were machines.

Furthermore, it is at least an open question whether a machine or a cyborg can always deliver results superior to that of a natural human being. When on January 15, 2009, Captain Chesley B. Sullenberger and his crew managed to land their aircraft smoothly on the Hudson River after all the engines of his Airbus 320 had failed because of a bird strike shortly after takeoff and they had to control their plane as if it were a glider, they performed a heroic feat that—I think we are safe to say—no machine could possibly have accomplished. And one may at least ask whether in their case performance-enhancing drugs could have taken the place of prudence, circumspection, and truly human excellence.

The present age is highly tempted to replace virtue—human excellence—by technology to get results without efforts. We would like to be

strong but do not like to exercise; we would like to lose weight, but do not want to adjust our diet; we would like to limit the number of our offspring, but do not fancy temporary abstinence from the pleasures of intercourse; we would like to know, but we do not like to go through the process of learning. Hence we seek the solution in a pill or a similar technological device that saves us the trouble of forming ourselves by our own volitional control. Technology can be the easy shortcut. The danger with shortcuts is that sometimes they make us miss our aim.[53]

The Brave New World and the Meaning of Our Bodiliness

In what is a very comprehensive book, Fr. Austriaco also discusses the difficult question of what to do with embryos produced in the process of in-vitro fertilization which then are not implanted but rather cryogenically frozen: the so-called "spare embryos" who have been "exposed to an absurd fate."[54] We do not actually want to propose a solution to this problem here. The only thing we feel urged to say on the issue itself is that the first evident step toward a solution has to be to stop the practice by which these embryos are being produced. This being said, our aim is actually rather to reflect on Fr. Austriaco's proposal, which to our mind touches on the very meaning of our bodiliness. Rejecting, to our mind wisely, the possibility of "spare embryos" being implanted in the womb of an adoptive mother, he still pleads for a kind of adoption: "Adoptive parents . . . could pay to maintain the cryopreservation necessary for the survival of their child until incubators capable of bringing him to term are invented."[55] In other words, for Fr. Austriaco, the solution to the problem of frozen human embryos ultimately lies in the advancement of technology, and more specifically, in the invention of what he calls advanced incubators, but which would really be artificial uteruses. The human side of the solution, that is, "adoptive parents" who pay for the ongoing cryopreservation of these human beings, is necessary only because this technology is not yet available. In what follows we would

[53] For a critique of biotechnological utopianism see Stephan Kampowski, *A Greater Freedom: Biotechnology, Love and Human Destiny. In Dialogue with Hans Jonas and Jürgen Habermas* (Eugene, OR: Pickwick Publications, 2013).

[54] Congregation for the Doctrine of the Faith, *Donum Vitae,* I, 5.

[55] Austriaco, *Biomedicine,* 109. Cf. also ibid., 237.

like to reflect on whether artificial uteruses could ever be the solution of any problem or whether they themselves would not constitute a new problem, in fact, one of extraordinary proportions, which would make surrogate motherhood seem to be something deeply humane.

In his considerations about technology as the subject of ethics, Hans Jonas points out how every new invention, once it exists, for good or ill becomes part and parcel of the human condition. It is hence wise to consider whether we should want to direct our research efforts into a certain direction or not.[56] As difficult as it was to invent the nuclear bomb, it is much more difficult to rid the world of it than it was to fill the world with it. It is no doubt a feat of medical science and technology in recent decades to have significantly increased a baby's viability outside the womb. Incubators have saved the lives of many children who, because of difficulties during the pregnancy, were born early, and no one wants to doubt the blessing these devices present. It is, however, an observable fact, noted by psychologists, that children who were born prematurely carry with them some additional burden, risking developmental problems.[57] The lost weeks or months of shelter, warmth, and safety in the mother's womb will later make themselves felt. This does not mean that they will necessarily be scarred for life. It is just to say that a preterm birth is an issue that needs to be dealt with and can be dealt with as any other handicap, though a handicap it is. What we want to say with this is that spending time in one's mother's womb is not optional. A mother is not just a sophisticated incubator that could just as well be replaced by an artificial womb or another woman's womb. A mother is not simply someone who gives the ovum. Given the profoundly human significance of gestation and birth, an artificial uterus would be the great abomination. It would be the final realization of Aldous Huxley's anti-utopia, a *Brave New World,* where people are no longer born, but rather "decanted." The dream or rather nightmare of the artificial uterus follows along the same premises as the practice of surrogate motherhood, but it is worse, inasmuch as it completely deprives a human being

[56] Cf. Hans Jonas, "Wertfreie Wissenschaft und Verantwortung: Selbstzensur der Forschung?" in *Technik, Medizin und Ethik* (Frankfurt am Main: Suhrkamp, 1987), 76–89.

[57] Cf. Carla Arpino et al., "Preterm Birth and Neurodevelopmental Outcome: A Review," *Child's Nervous System* 26 (2010): 1139–49.

in his or her coming to be from any kind of interpersonal context. The crime of surrogate motherhood lies in its confusing the child's identity. Who is the mother? The one who donated the ovum or rather the one who carried the child to term? Experientially there is little doubt that it is the one carrying to term, the one who gives birth, and of whose warmth and care the child will be deprived soon thereafter. But at least the child was allowed to *have* a mother: a woman to bear the child in her womb and to give the child birth. A human being made to grow in an artificial uterus would be deprived of this most basic human experience.

The fact that human persons spend the first nine months or so in their mother's womb is not simply a brute biological datum but has profound personal significance. We come to be and develop in another: this is a fact of profound anthropological import.[58] We are originally related, and these original relations are formative of our very identity.[59] The personal and human significance of gestation and birth can hardly be overestimated.[60] I do not believe that Fr. Austriaco is unaware of these truths, and I do not assume that he is an advocate of artificial uteruses in themselves. He simply proposes them as a possible solution to a deep moral dilemma. What we would like to ask is simply whether the solution is not much worse than the problem.

Beside other things, we will have to keep in mind that artificial uteruses, once they became available, would be used not only to resolve the dilemma of "spare embryos," but would evidently find a larger application. Human beings would then be able not only to replace the human

[58] Cf. Joseph Ratzinger, "Truth and Freedom," *Communio* 23 (1996): 27: "[T]he child in the mother's womb is simply a very graphic depiction of the essence of human existence in general. Even the adult can exist only with and from another."

[59] Cf. Livio Melina, *Building a Culture of the Family: The Language of Love* (Staten Island, NY: St. Pauls, 2011), 13, who argues that the relationships that bear on our origin or by which we bear on someone else's origin are at the foundation of personal identity: "[T]he relationships that are constitutive of personal identity [are]: recognizing oneself as child in order to become a spouse and thus to become a father or mother."

[60] See Hannah Arendt's crucial idea of "natality" as she develops it, for instance, in her *The Human Condition* (Chicago: The University of Chicago Press, 1958) and, on Arendt, also see Stephan Kampowski, *Arendt, Augustine, and the New Beginning* (Grand Rapids, MI: Eerdmans, 2008). For the anthropological and philosophical implications of birth in general see also Stephan Kampowski, *Ricordati della nascita. L'uomo in ricerca di un fondamento* (Siena: Cantagalli, 2013).

act of love that is usually at the person's beginning with a technological act of production. They would also be able to provide a technological solution to the human person's growth and development, outside of any interhuman context, creating beings at whose beginning there has never been a single act of human love:[61] not at their conception, not during their gestation, not at their birth. That this would be an act of grave injustice toward them hardly needs to be mentioned. Whatever else bioethicists should do, in my view one of their goals should be to prevent artificial uteruses from ever being invented.

Conclusion

As I said in the beginning, the issues I have raised in this brief essay are meant to be an invitation to further reflection, taking Fr. Austriaco's helpful book as a point of departure. Among other things, we have dealt with the question of how married couples afflicted by AIDS can live their conjugal life in a morally upright way, suggesting that the debate may actually find new perspectives by recent developments in medical science. On the topic of virtue and technology, and in particular as this refers to the issue of human enhancement, the last word has not yet been said and further discussion seems welcome. And finally, the question of what our biotechnology does to our relational identity as human beings who derive from others will certainly remain an issue worth further conversation. With his *Biomedicine and Beatitude* Fr. Austriaco has provided us with a valuable *status quaestionis* of the current bioethics debate that is at the same time thought provoking so as to spark further and ongoing reflection. N&V

[61] They would of course still always be loved by God.