Playing God ?

Which Ethics for Bioethics? The Example of CRISPR-Cas9

by
Prof. Mark Hunyadi (Catholic University of Louvain, Director of the Center Europé)

Metaphors have their history, and those that have from the beginning characterized genetic biology have followed its evolution as its shadow. In the twenties, Morgan's architectural metaphor of the gene as the foundation or the elemental brick of life prevailed. This metaphor was replaced with the metaphor of action; with the notion of gene action. Watson and Crick (we always forget Rosalind Franklin) introduced the informational metaphor into biological discourse. In its wake, in the 70s, the engineering metaphor of manipulation spread. And today, after having spoken in the meantime of the book of life as it was delivered to us by the sequencing of genomes; it is quite natural that we have come to speak of 'editing'. *Word* has been there. We no longer manipulate the genome, we edit it. The discovery of the CRISPR-Cas9 tool has made the metaphor of publishing central to genetic research. Editing means, as for a text, correcting errors, eliminating typos, cutting, pasting, modifying a word, improving one part of a text, hybridizing it with another - the text being in this case the genome. The metaphor of editing contains within itself all the previous metaphors.

Is it playing God, as another metaphor says which gives its title to our conference? Some are worried about it, others are happy about it. Personally, I do not know if we play God, because I do not know exactly what God is playing. It is clear, however, that what is suggested with this theological metaphor is that biologists substitute for God, in his act of creating or making humans, by creating something new, coming from the power of the human will alone. But we know that even with regard to God, the debate has been open since the 14th century nominalist revolution. Was the act of creation an act perfectly free and therefore extra-ethical, in the sense of being anterior to all ethics? Or was this act in itself ethical, in which case it would not be absolutely free, since it was already oriented and therefore limited by ethical rules? If so, that would be an obstacle to the freedom of God.

This extensive debate, I do not intend to resolve here. I prefer to resign myself to recognizing that I do not know what God is playing, not knowing whether he himself has respected ethics or whether he has instituted it in a sovereign act of creation. On second thoughts, I believe that this theologically decisive question is ethically inessential. I will try to explain why, and I will definitely drop the metaphor of the gambler God.

What I do know is that we do not have a choice: ethics is there, it precedes and shapes us. Naturally, I do not ignore that the "ethics" is a singular collective noun, and that *the* ethics, as such, does not exist. There are *ethics* (after all, the Nazis also had their ethics), they are plural and can be contradictory, each with its own grammar and syntax. But what I mean is that, in a general way, our actions are immersed in ethics as our bodies move in space. To act, whatever the action, is to act ethically, whatever the ethics. Every action has an ethical impact, even if the action does not have an ethical purpose. That is why there is, for example, an ethics of the technique: to plant a nail is a technical action which does not have a direct ethical purpose, and yet the crash of nail carries in it a whole ethics of the relation to the tool, to the environment, to nature and therefore to the whole industry that makes nails and hammers. It is a question of the way we *perceive*: one can naturally consider the crash of a nail as a purely technical gesture, responding each time to an immediate circumstantial problem imposed by the situation of the moment; but it can also be considered as containing in germ the

essence of our technical relationship to the world; this essence typified by the tooling industry and reinforced by the whole domestic economy of furniture to assemble oneself.

The same thing holds true for the editing of genes, with the notorious difference that here it is no longer a question of managing our environment, but of acting directly on humans ourselves. Ethics is therefore more immediately present; it is closer than in the crash of a nail. Of course, gene editing *is* a technical problem or a cluster of technical problems, and technicians have to solve them. But if a technician strongly suggested that editing genes is *only* a technical problem and serves only to solve a problem in the same way as all the others, she or he could rightly be suspected of being blind, or at least suffering from of an acute form of color blindness. This does not mean that they must necessarily consider or analyze the ethical questions posed by their practice, but that they cannot reasonably deny that this practice requires, like all human action, (but more directly than some others), an ethical evaluation. If this action did not require such an evaluation, or if it was self-evident that such an evaluation is useless, we would already live in a world of engineers, and we would not be here to discuss the ethical problems of CRISPR-Cas9.

The interesting question about CRISPR-Cas9 is: Exactly why is this technique an ethical problem? The most obvious answer to this question is to say that as a genetic technique backed by a whole tradition of genetic techniques, it falls under classical medical ethics, with its inherent problems and difficulties, which are nevertheless already well mapped. We are here in the field of respect for individual rights and freedoms, the protection of the person, with its cohort of prescriptions on safety, on the avoidance of unintentional harm, mixing the ethical considerations of respect for the person and informed consent and consequential cost-benefit calculation, calculation of risks, potential risks, etc.

So, we are at the level of what I call "Small Ethics", the liberal ethic of individual rights and freedoms. By calling it "small", I do not mean that it is not important or that it can be neglected; I mean that all the problems, not just those of genetic engineering, are viewed through the lens of individual rights and freedoms. It is, in a nutshell, the liberal ethics of human rights, which takes the individual as the foundation of all its normative architecture: nothing is acceptable that violates individual rights or freedoms, and conversely, everything is acceptable, as long as it does not affect those same rights.

So "Small" does not mean unimportant, but centered on the individual and the defence of individual rights, as opposed to an ethical point of view that would be global, encompassing, embracing all existing reality as such. "Small" is not synonymous with insignificant but is opposed to global. It can be said that the Pope's ethics are global because he embraces the world as a whole from his normative gaze, while the human rights ethic is small because it only deals with individuals. This is obviously essential, but it is not global.

Thus, at this first stage of bioethics, ethical problems is raised only when we comes to the practice which concerns the small ethics. Ensuring respect for Small Ethics drives all our commissions and committees that flourish at all institutional levels of society. European texts in this area offer a striking illustration, such as the Oviedo Convention[1] (1997), which is of particular interest to us, but also the most recent of the Parliamentary Assembly's recommendations (Oct. 2017, recommendation 2115), all of which are structured around the protection of the person and the very vague and undefined notion of human dignity. These texts are always characterized by strong normative positions (prohibition to

[1] Which, moreover, has not yet been ratified by England, Germany, Belgium, Italy, Russia, Ireland, Austria, Sweden, Poland, the Netherlands, for to name only them.

modify the germline, exclusion of any improvement in favor of therapeutic use alone, absolute respect for fundamental rights and freedoms), but extremely weak justifications, which all refer, through a trail of reference of legal texts, to the recurrent but never clearly defined notion of human dignity. It is therefore quite right that the purely incantatory character of this philosophically insecure foundation should be deplored.

It is this normative weakness that permeates all the pragmatic and/or consequentialist arguments that are not impressed by exhortations to respect human dignity; philosophically very problematic indeed. In general, these consequentialist approaches propose that bioethics should focus on the clinic, on the needs and feelings of patients, in order to offer them ethically acceptable solutions to practical problems. By "ethically acceptable" they mean: without identifiable medical danger for patients or their offspring.

CRISPR-Cas9 offers a good example of this diversity of approach. In accordance with its deontological reading of Small Ethics, the Oviedo Convention prohibits intervention on the germline of human beings, considering it as an ethically inviolable limit. Faced with this, the consequentialist advocates of germinal therapies show that in some cases (certainly rare) such therapy is the only way to avoid disease in a child that is yet to be born. These are cases where Preimplantation Genetic Diagnosis (PGD) is of no help. Pragmatic and consequential supporters therefore no longer see any principled reason to forbid germline interventions, especially for reasons as elusive as those of undefined human dignity. They are encouraged in their drive by the fact that the CRISPR-Cas9 technique is clearly scientifically the most accurate, fast and least costly genome-editing technique Uncertainties do exist and these difficulties should not be underestimated, especially since we do not currently have any feedback on the possible impact of such a germinal intervention on generations of descendants. This is a problem, but because of the hope that these techniques allow, simple scientific good sense promotes it as a primary therapeutic research method.

However, we can see that consequentialists also reason within the narrow framework of Small Ethics. Their sole criterion of appreciation is individual well-being, an individual need that is to be reflected in law - in this case, it is the need to have genetically affiliated offspring, a need quickly translated into a fundamental freedom to procreate, by means of the security of the envisaged technique, without giving credence to any argument that invokes human dignity. On the contrary, enabling people with a disease to have healthy children brings us one step closer to what opponents of the technique call human dignity.

By avoiding any global ethical questioning, Small Ethics promotes by itself a technical vision of bioethics which, by the very nature of the problems it faces, has a tendency to focus on the medical results obtained by the new techniques. This is why strong claims are made explicitly to embrace the exclusively technical nature of biomedical research and the ethics that goes along with it - not to mention that this technical attitude is obviously today powerfully reinforced by the commercial interests that structure the research. It is therefore inevitable that there is today a strong tendency in the world to ‘technicize’ bioethics and to try to snatch it from any moral strait-jacket that might be considered to hinder it (Julian Savulescu, Oxford, is also from this opinion). According to these bioethicists, it would, therefore, be necessary to detach bioethics from theoretical thinking in order to consider only its practical effects. Thus, in a controversy triggered in 2015, as the German researcher Martina Baumann recalls, "bioethics has been severely criticized for being too detached from reality, reasoning on the theoretical principles of dignity, autonomy, and others, while it is about relieving suffering related to diseases. Instead of being overly restrictive, bioethics would do better to focus on

quickly assessing new technologies in their context and doing so on a case-by-case basis. The controversy reported here is that triggered by a *Boston Globe* article whose author, Harvard psychologist Steven Pinker, summed up his thought: "The primary moral goal for today's bioethics can be summarized in a single sentence. Get out of the way. "

For these bioethicists, treading a technical path, even Small ethics is too restrictive, whereas it is basically only aimed at protecting the individual. But it is already too much for them, they who are willing to take risks to be able to ultimately lead evolution, they who fear nothing so much as to be restricted themselves. Recall that CRISPR-Cas9 is now part of the panoply of transhumanists, who see it as an unexpected opportunity to genetically improve human nature.

Whatever may be said of this revealing controversy, today, bioethics is entirely in the hands of Small Ethics, even if some want to free it because it seems too restrictive. This desire for emancipation is the ultimate expression of the technical vision of bioethics that Small Ethics carries with it. Small Ethics is the ethics of the end of ethics. This technical vision means that in the end everything is measured by risks to individual health, whether this risk is measured against the dignity being compromised or adverse medical consequences. The reasoning differs substantially (since in one case we refer to dignity, in the other to well-being), but it is structurally the same: as paradoxical as it may seem, deontologists and consequentialists are on the same side of the barrier in the field of Small Ethics which in both cases measure the practical legitimacy to the result obtained. Small Ethics, by focusing on the individual (on his rights or on his well-being) focuses simultaneously on an ethics of the result (respect for dignity or increase of the well-being).

However, despite this marked tendency of Small Ethics, it is necessary to recall forcefully that the evaluation of the result is not the only way to evaluate an ethical action. Perhaps it is not even the most important. Before I demonstrate this with the specific problem of genome editing, I would like to quickly explain this.

Is the final result, the outcome, the moral criterion of everything? This is a question which, of course, deeply divides moral philosophers. However, I would like to draw attention to the facts of day-to-day experience that indicate that the mere way of treating someone is in itself morally significant, regardless of the outcome sought or obtained. I do not want to speak here simply of the intention that presides over an action, nor do I want to repeat the classic distinction between the ethics of responsibility, oriented towards consequences, and the ethics of conviction, focused on intention. Rather, I want to talk about how others are viewed in the very act that we do, the way we take this into consideration, regardless of the purpose we are aiming for.

Allow me first to take an example from outside the bioethical problems: it is quite another thing - ethically quite another thing - to explain to refugees that such a country or continent cannot welcome them all, and to accompany them with dignity, than to let them drown at sea in order not to have to receive them. This means that for an identical result (the non-reception of refugees), one has an ethically fundamentally different way of dealing with the problem. Why? Because refugees have been addressed in a fundamentally different way. In the first case, we spoke to them as humans, certainly in distress but capable of understanding, while in the second they are treated as parasites to be eliminated. This difference in the way of treating someone, I call the "ethical quality" of the action, that is to say, how we apprehend others in their action, the way we address them and consider them, regardless of the purpose of the action. The same aim can be achieved by qualitatively distinct means, which consequently gives the action an ethical quality that is different every time.

This does not mean, of course, that the result, the consequences or the impact of an action should be totally or even partly ignored - this would be a reverse moral blindness. But it is just as absurd to order all morality around the only goals to be achieved. As my example of refugees shows, the way in which they are taken into consideration matters ethically at least as much, if not more, than the goal one seeks to achieve.

However, the ethical quality of the action is precisely what is hidden in all the approaches that focus only on the result produced. The end product of this 'culture of result', if I may say so, is an ethical neutralization of human activity itself, in favor of a purely technical vision focused on the problem to be solved - as in the refugee problem. This is what Small Ethics does, which pushes for this form of ethical solutionism (except that in the case of refugees, even basic Small Ethics is not respected). Consider, for example, the case of the bioethicists mentioned earlier: the only horizon of bioethics is to relieve the suffering of patients. This is a way of completely absorbing bioethics in the technical field of the resolution of problems, neglecting the ethical framework in which they must be solved. Defining bioethics in this way is one of the ways that bioethics borrows to become a vassal of technology.

In the same vein, post-humanists' meliorism, for whom CRISPR-Cas9 is an unexpected windfall, generally considers that the genetic improvement of a child by its parents is entirely equivalent, in its intention, to the efforts that are made in classical education to make one's child better; and that if we can achieve the same result with more efficient and less expensive biotechnical means, why should we not go for it? This attitude is typical of an ethics focused only on the result. However, for me to educate, it is not at all the same thing as to intervene technically, even supposing that the result is ultimately identical. Why? Because it is not at all the same thing to consider one's child as a mass of cells to be shaped by genetic engineering or as an autonomous being that can be made to improve itself through education. It is precisely a question of ethical quality: it concerns the way we address others, to consider this child, to apprehend him in his action, and crucially to do so regardless of the purpose. The parallel genetic manipulation neutralizes the quality of the act in favor of the expected result.

This neutralization of ethical quality seems to me to be the most general, but also the deepest impact of the biotech vision of the world that today accompanies bioethics and the ethics that goes with it, namely Small Ethics. It is this neutralization that dehumanizes the world and projects a world of engineers entirely governed by a reason that has become purely functionalist.

If one submits CRISPR-Cas9 to the test of what I call ethical quality, the essential ethical question would no longer be whether or not, in the end result, the technique envisaged contravenes the requirements of Small ethics, but: how is the human being envisaged by the use of this technique? Is it simply considered as a biological object, that is to say, a mass of cells to be shaped according to ends that are external to it, or as a human that one wants to restore in the fullness of its capacities? And we could answer, in a dispassionate way: it depends on the use we make of it. It could be used without restriction if it is at the service of a therapeutic act that considers the other as a vulnerable being, in pain, and that one would seek any way to treat. If this technique is more efficient than others, I see no ethical reason to impose any restriction. On the other hand, if it considers others or oneself as a capital to be increased, as a function to be improved, as a technical object to perfect, then, in these cases, it is to be proscribed.

Reasoning in this way would make it possible to avoid the use of dogmatic prohibitions based on human dignity, which, for example, forbid *a priori* any intervention on the germline; but it would also make it possible not to stick strictly to the supposed well-being of the individual concerned, and to subordinate any other consideration to it. The question of ethical quality would, therefore, allow us to get out of this pendulum game to which Small ethics seems to condemn contemporary bioethics between deontology and consequentialism, and to recall that the heart of bioethics is not technical performance and its servile accompaniment, but relationship to others, culminating in the type of world that we build through this relationship to others.

I add that this question of ethical quality does not only concern the relationship of the scientist with the one she is called to heal, it must also concern how each one considers himself. When, in post-humanist discourses, one considers oneself as a biological mechanism to be improved, one self-reifies oneself, considering oneself as an artefact whose performance one wants to improve.

Therefore, considered from the angle of Small Ethics, the CRISPR-Cas9 technique is part of this reification or self-reification that is a major trend in today's world. In a manner quite similar to what happens in the digital world, we are no longer interested in people, but in profiles that are shaped to meet the supposed expectations of others; human interactions are further mediatized by the evaluations of others, which means that we are reified by numerical evaluations, and self-reified by the evaluations we expect from others (see the example of the episode of Black Mirror series entitled Nosedive, Freefall).

It may seem odd to compare the phenomena of digital reification and self-reification with the use of CRISPR-Cas9. But it is precisely the purpose and intent of the notion of "ethical quality" that decompartmentalize the ethical issues and remove them from the fragmentation and isolation in which Small Ethics maintains them. The system reproduces itself by fragmentation and is maintained by it, evacuating each time all the questions related to the direction of the use of the techniques. This is how it participates directly in the ethical neutralization of the world. On the contrary, the question of ethical quality makes it possible to adopt a transversal, that is to say, all-encompassing perspective, by placing the whole of the questions of Small Ethics in the broader context of the meaning that the techniques taken in isolation can have. for and in the human world in general. It is this ‘transversality’ that would make it possible to get out of the rut of Small Ethics, and to give the techniques and their use a non-dogmatic ethical framework - this is obviously essential in our pluralistic world - while respecting eminently the fundamental interests of cutting-edge research. That we seek not to hinder it but to give it a meaning seems to me an elementary requirement of an ethical attitude, whatever the opinion of today’s purely technicians of bioethics might be.

But what strikes me in today's situation is that we are actually not equipped to respond collectively to this question of meaning. I mean we are not collectively or institutionally equipped to do this, prisoners as we are of Small Ethics that focuses on the issue of rights and freedoms. All our bioethical institutions - the European texts are perfect, but in my eyes dramatic illustrations - are cut to the size of Small Ethics. (A circumstantial parenthesis: the whole of the State’s General debate of bioethics that we are currently living in has been placed by the CCNE under the sign of the question: "Which world do we want?" - and this question seems to me really the question essential to ethics in general, but also to the ethics of bioethics in particular, and it is precisely this essential question that it is impossible to answer in our institutions because the questions of meaning and values are structurally confined to the private sphere. The modern liberal state (in the sense of Rawls) and the public authorities, therefore, expel the questions of the great ethics or global ethics in principle, and thus curl up on Small ethics).

Bioethics does not have the ethics it deserves. As paradoxical as it may seem at first glance, I believe that institutional bioethics participates in the ethical neutralization of the world - even (I am aware) as ethics committees are multiplying at every level of society. But as they are only the organs of Small Ethics, this proliferation only contributes to the fragmentation of ethical problems that systematically obscures the issues of ethical quality, and facilitates the purely technical vision of the world and, simultaneously, as we have seen, of bioethics itself. This could be called the "bioethical paradox of our time".

To get out of it, we must get out of Small Ethics, and thus transform the institutions of bioethics that are organized around it. The challenge, which is not a small challenge, is to make our bioethical institutions adequate to the questions that bioethics itself raises day by day. Because the ethical fragmentation and the solutionism that goes with it make us lose sight of the global nature of what is at stake each time, namely the type of humanity we want. Today, however, we do not have the institutions to answer this question. They must be invented or reinvented - exactly as bioethical institutions were invented in the 1980s! We, therefore, need creativity or institutional inventiveness, because I am convinced that the ethics needed for today's bioethics can only be elaborated collectively, in common, and therefore in the framework of common institutions. Only such an institution, to be invented, will make it possible for us not to consider ourselves as the slaves obligated to the technological progress that Small ethics accompanies.

Mark Hunyadi