Caring for Monsters

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There are five overlapping ethical objections to the creation of chimera: 1) Unnaturalness; 2) Species Integrity; 3) Moral Taboo; 4) Environmental Risk and 5) Chimera Welfare. This chapter will briefly outline the first four, before arguing that considerations of chimera welfare provides us with a strong reason against the creation of some, but not all, chimera. According to the argument from unnaturalness it is simply not our place to intervene in the basic mechanisms of nature. Critics of this view often challenge the coherence of any distinction between nature and human convention and the implicit assumption that nature is perfect as it is . Furthermore, it is often argued that, ad absurdum, the argument leads us to condemn as immoral the damning of rivers and the ploughing of fields.

Sometimes considered a narrower interpretation of the unnaturalness argument, the argument from species integrity representks a realist position in which species are natural kinds whose distinction from each other we are under a moral imperative to respect. Against this view it is often argued that the idea of species is nothing more than a convenient system of classification and that anyway, the mere existence of something does not imply a moral imperative to maintain it .

The argument from moral taboo appeals to a common and intuitive disgust at the creation of chimeras. Such moral taboos, on this account, serve important social functions with taboos against incest, for example, guaranteeing a healthy level of genetic diversity in the community . In response critics counter that few (if any) taboos remain constant across time and cultures, taboos against crossing species boundaries being no exception. Many past (e.g. Ancient Egyptian) and some present (e.g Hinduism) religions contain, or contained, gods who appear to combine, in their form, human elements with those of other species .

The Environmental Risk argument appeals to consequential considerations for the ecosystem and therefore the survival of our species. In making

biological mixtures for which there is no natural precedent we have no idea what to expect. Chimeras may act as half-way houses between species for diseases or, breaking out of laboratories, may breed with other species and upset the delicate balance of the ecosystem. Objections to the argument centre round the extent to which risk can be minimized and the outweighing of such risk by potential benefits .

The Chimera Welfare argument thinks experimentation should be restricted by obligations, both to existing individuals and to those individuals one wants to design and create. Creating some chimeras is wrong because it neglects said obligations. Exactly what obligations do we have to existing sentient individuals? A good place to start is current restrictions, informed consent aside, regarding human test subjects. The "International Ethical Guidelines for Biomedical Research Involving Human Subjects", published by The Council for International Organizations of Medical Sciences (CIOMS) in collaboration with the World Health Organization (WHO), states four ethical principles . "Respect for persons" calls for the "protection" of "dependent and vulnerable" persons "with impaired or diminished autonomy" against "harm or abuse" . "Beneficence" demands that risks be "reasonable" compared to "expected benefits " while "nonmaleficence "proscribes the deliberate infliction of harm on persons ". Finally, "distributive justice" requires "the equitable distribution of both the burdens and the benefits of participation in research " and that difference in distribution be justified by some "morally relevant distinction between persons ". These principles form reasonable restrictions regarding human test subjects who are incapable of informed consent. Indeed, acceptance of such principles appears so widespread that even systematic offenders against them, such as Nazi scientists, did not openly reject them but argued that the principles did not apply because their test subjects were sub-human.

The traditional response to the Nazi scientist is to argue that the test subjects were indeed members of our own species. A more radical approach, however, is to question the assumption that membership of our species is a necessary or sufficient condition to be protected by the CIOMS principles. Why not replace 'persons' with 'sentients' and extend the principles to all sentient creatures? In taking this line I am adopting

Singer's famous call to extend to other species "the basic principle of equality " understood as "equal consideration of interests ". If we oppose the restriction of this principle to one race then, Singer argues, we must oppose its restriction to one species . Any attempt to restrict its extension to ownership of a particular mental or physical attribute is arbitrary because one can always ask, why this attribute and not another ? Furthermore, any attempt to restrict extension to human beings faces the problem that any characteristic basic enough to include every human being will also include many animals . On the other hand, any attempt to choose an attribute that will exclude these animals will also exclude many human beings like young infants and severely mentally disabled infants or adults . Singer dismisses out of hand, tying the principle of equality to the simple fact of species membership on the grounds that this is analogous to tying it to membership of a particular race . The capacity for "suffering" as a necessary and sufficient condition for having interests is, for Singer, the only reasonable boundary .

A large number of those who wish to limit the basic principle of equality to our own species do this on the grounds of a special "human dignity" not found in other species. This concept has its roots in the Judeo-Christian tradition and is traditionally justified by man's position in the "great chain of being" where he has "dominion" over animals . Other justifications include souls, a likeness to God and Jesus' Incarnation in a human body . Secular versions of human dignity have their roots in Kant's avowal that only "rational beings" have "unconditional and incomparable worth" or dignity because they are capable of moral agency . Unfortunately, modern secular conceptions often never define 'human dignity' , and so leave us wondering why it is not extended to animals, or define it in such a way that many arbitrary qualifications are needed to avoid the exclusion of infants and severe mental defectives. Conceptions of human dignity can detract from animal welfare by either implying that, in a conflict of human and animal interests, it is morally permissible to favor humans or by suggesting that only human interests are morally relevant.

Human dignity aside, an alternative response to our position is to consider, as does Michael Allen Fox , the moral community in terms of a social contract model. Building upon Kant's stress on moral agency, Fox

argues that moral obligation can only exist within a moral community consisting of a series of "mutual guarantees", "by tacit agreement", of "nonintervention in the self-governing lives of others ". However, to participate in a mutual guarantee one must be able to understand and implement one's own side of the bargain. In short, to be the subject of moral obligations you must be capable of moral agency. To be a moral agent one must be autonomous which, for Fox, requires not only "critical self awareness; the ability to manipulate complex concepts and to use a sophisticated language " but also "the capacity to reflect, plan, deliberate, choose, and accept responsibility for acting ". Not being autonomous, animals are incapable of moral agency and thus are not subjects of moral obligation. Given its necessity to participation in any contract and its description in terms of a cluster of features, Fox's stipulation of moral agency appears to avoid Singer's usual charge of arbitrariness.

Its seems, however, that Fox's argument still sets the bar for membership of the moral community so high that many normal infants, severely mentally defective infants and adults are denied membership. Fox's reply is that normal infants are brought under the protection of the moral community because they have autonomy in "latency ". It is briefly suggested that severely mentally disabled adults and infants should be protected because this provides a form of insurance for moral agents should they, through illness or injury, lose their own autonomy . Putting aside, for charity, problems with the moral relevance of potential in normal infants, the idea of insurance works well for adults who have lost their autonomy through accident or illness. However, Fox needs to find some other way of justifying moral obligation towards severely mentally deficient infants which have no 'latent' autonomy and whose protection is not prudential for moral agents: a forty-year-old man is not afraid of becoming a mentally deficient four-year-old. Fox's answer is two-fold. Firstly it is argued that our intuition in favour of moral preference for members of our immediate family justifies moral preference for our "human family ". For additional support, Fox adopts John Passmore's account of a "chain of love and concern " that extends down the generations and includes the "places, institutions and forms of activity " that constitute our day-to-day existence. Though not explicitly put, the thought seems to be that moral agents care for their descendents who may turn out to be mentally defective infants, therefore the protection of

mentally defective infants is in fact another form of prudence.

The first part of this argument will not wash. Fox needs to assume that the original intuition is based on our biological relation to immediate family members, in which case the intuition would also justify racism. However, the intuition is based upon the relationships built with family members (natural or adopted) and thus does not extend to strangers from our own species. Furthermore, the intuition justifies moral preference regarding superogatory acts as opposed to basic moral obligations . It will justify buying family members, but not strangers, birthday cards but will not justify stealing from strangers. Fox's second argument needs to take account of the fact that, given the progress of biotechnology, one of my distant descendents may be genetically altered so that moral agents do not consider the resulting chimera wholly human. Given this, it seems that concern for one's descendents must in fact lead us to extend "the basic principle of equality " to all sentient creatures.

Having established our moral obligations to existing organisms the question arises as to what obligations we have to organisms that will come into existence as a result of our design and creation. In answer to this I would like to adopt a slightly altered version of Bernard Rollin's "Principle of Conservation" which states that it is not morally permissible to bring into existence a creature whose expected quality of life (as a result of the developmental modification) is likely to be lower than is normal for the host's parent stock . If an alteration in functional capacities lowers quality of life below this point it is most likely due to the frustration of telos. Telos is an originally Aristotelian concept, according to which each species of animal has a natural way of life consisting of a series of ends or activities, some of which are shared by other species and some of which are species specific . Individual organisms are instinctively driven to fulfil these, with success in the enterprise creating contentment and failure creating suffering. If our previous argument about extending "the basic principle of equality" is accepted then the Principle of Conservation applies to all possible sentient creations.

Before moving on let us deal briefly with some objections that may be made to The Principle of Conservation. One objection is that a creature must exist before it can be harmed or benefited and so the act of

creation itself does neither good nor evil to the organism in question . It may be responded that this objection rests upon the broad assumption that all moral wrongs involve wronging individuals when there are certain things, such as destroying the last instance of a rare orchid, which we consider wrong independently of harm to individuals . Against this it will likely be countered that such 'victimless wrongs' still derive their wrongness from effects upon individuals. If I destroy the orchid many people will lose the chance to experience its beauty while my contribution to the lack of biodiversity harms the environment and thus all individuals living in it. To truly silence the objector it is tempting to argue intuitively using a thought experiment in which, when crushing the orchid, I am the last sentient individual in the universe. Such refutation is not necessary, however, for the key problem with this objection is its implicit assumption that actions can only be wrong due to effects upon "identifiable individuals ". Parfit , however, recognises that such a view would commit us to regarding many future actions, such as setting a bomb under St. Salvator's quad to go off in fifty years, as morally neutral because they don't harm or benefit "identifiable individuals ". Many of the victims are unidentifiable because their identities will be the result of decisions made between now and then but it seems absurd to say that they cannot therefore be harmed.

It may also be objected that measuring quality of life to any useful degree involves an understanding of the consciousness involved and, as such, is obviously impossible when that consciousness does not yet exist. In answer to this I take what Degrazia calls an objective view of wellbeing according to which judgment of the future organism's quality of life is based upon her chances of achieving "species-typical levels of mental and physical functioning ". This approach maintains a subjective element, however, insofar as the degree to which the future organism is likely meet these standards gives us some idea how good or bad life will be from its own perspective.

Accepting the Principle for the Conservation of Welfare, it follows that, when our normative principles are combined with the definition of chimera reached in the first chapter, we will judge the moral permissibility of creating chimeras on a case-by-case basis. Chimeras resulting from intervention in the embryo (pre-differentiation) will be judged by the

New Principle for the Conservation of Welfare and in doing so we must understand three crucial points. Firstly, not all new functional capacities change telos; secondly, those which do not may either help, hinder, or not effect fulfilment of the existing telos and thirdly, relative to physiology, changes in the telos may either preserve or diminish welfare. That some alterations in arrangement do not change telos is intuitively obvious given that telos is psychologically determined and, for example, whether or not an individual has wings will not affect her underlying psychology. Such a change would not change telos but does provide us with an example of a non-telos-changing alteration in arrangement that would help the organism fulfil its current telos. Accomplishing one's ends or goals would be a lot easier if one had wings and the same would seem to apply to individuals with, say, sonar or night vision. An example of a non-telos-changing alteration in arrangement that would not affect the organism's ability to fulfil its telos might be an 'omnicow': a cow who can also digest meat. Such an alteration would have no effect upon telos because, while it does not interfere with the normal activities of a cow, neither does it give the omnicow an advantage in fulfilling her ends. On the other hand, one non-telos-changing alteration in arrangement that would probably hinder the fulfilment of telos might be a dog with a shark's tail in place of its two back legs. This 'sharog' would seriously struggle to accomplish its ends upon land and, though the tail might help him swim a little faster, this is of little consequence, there being nothing in an average dog's telos that requires swimming. Those deviations in a chimera from the standard functional arrangement of its species which produce a fundamentally different underlying psychology may change the telos for good or bad. A change in telos is a change for good insofar as something has been added to the original telos and it is ensured, perhaps through simultaneous changes in physical arrangement of the organism, that the organism is capable of fulfilling the new aspects of its telos. To use a concrete example, intervention in a cat embryo to create a catman with the desire, in addition to a normal cat telos, to communicate with language is permissible insofar as the catman's design includes whatever physical augmentation is necessary to use a complex language.

Regarding chimeras resulting from xenografts of large parts of the brain in post-differentiated embryos or adults, these will be judged by our version of the four CIOMS principles which implicitly include considerations

of telos. To use a concrete example, let us examine the quail-chicken chimeras referred to in chapter one. This case appears to violate at least half of our principles for research on those incapable of consent. The exploitation of the chickens is contrary to both 'distributive justice' and the principle of 'beneficience' because there is no equal distribution of the burdens and benefits of participation and the chickens involved are put at great risk while appearing to gain nothing from the experiments. Whether their creation is contrary to 'respect for sentients' and 'non-malefience' will depend on whether the quail chicken's biology allows it to fulfil whatever quail ends it is conscious of . Given that chicken and quail physiology appear broadly similar one would guess that it would be able to fulfil these but, pending an exact comparison, we reserve final judgment.

Creating a chim

era from a brain xenograft, we might think, would be permissible if it made the host far more intelligent. Here we should be cautious, however, and remember that intelligence by itself does not increase welfare and may actually reduce it. Not only can intelligence increase suffering through an increased knowledge of one's situation but also, as we have seen, by adding something to the telos which the body is incapable of satisfying. If a xenograft designed to increase intelligence changes the telos of the chimera in question from the parent stock, the same rule applies as to the humanzee created by developmental modification. Telos may only be expanded if it is combined with physical augmentation which ensures that the new telos can be fulfilled. If this condition, along with our version of the four CIOMS principle, is satisfied then the sentient in question could benefit from a brain xenograft and the creation of this chimera might be permissible.

Having established that creation of certain chimeras is wrong, the question arises as to how this 'wrongness' is to be interpreted. To one extreme we might mean wrong in a strict deontological sense where it is always impermissible and no room is allowed for mitigating factors. To the other extreme we might mean wrong in a consequentialist sense which allows that wrongness to be outweighed by other consequences in the pursuit of a greater good or the avoidance of a greater evil. The key question for whatever sense we choose is whether the means can ever justify the ends or, to be more specific, whether the creation of such

chimeras might be justified if they led to extremely valuable medical advances. There is not space here for a full answer to this question and so it will suffice to leave the reader to make up her own mind on this. In doing so she should, however, be cautioned that the fact that our normative principles centre upon negative duties not to inflict pain and suffering does not necessarily imply as a bedrock a Utilitarian system which includes positive duties to increase the overall welfare of all sentient creatures.

Our objection from Chimera Welfare argues that we have obligations both to existing sentient individuals and those individuals we bring into existence by our creation and design. These obligations are extended to all individuals (sentient individuals in the first case) regardless of species. Two sets of principles constitute the content of these obligations. Firstly, our version of the CIOMS principles prohibit, in the case of existing sentient creatures, intervention where any benefit to the creature is outweighed by its harms and burdens. Secondly, the Principle for the Conservation of Welfare prohibits the creation by developmental modification of any chimera whose expected quality of life will be lower than that of the host's parent stock. Given limitation of length, the nature of these prohibitions – whether they are absolute and, if not, in what scenarios they might be overridden – is here left to the judgment of the reader.