

The Linacre Quarterly

Volume 56 | Number 1

Article 6

February 1989

Is There a Natural Morality?

Jerome Lejeune

Follow this and additional works at: <http://epublications.marquette.edu/lnq>

Recommended Citation

Lejeune, Jerome (1989) "Is There a Natural Morality?," *The Linacre Quarterly*: Vol. 56: No. 1, Article 6.
Available at: <http://epublications.marquette.edu/lnq/vol56/iss1/6>

Is There a Natural Morality?

Prof. Jerome Lejeune

The author, a professor of genetics at the University of Paris, gave this talk at the 2nd International Congress of Moral Theology in Rome. Professor Lejeune has been a member of the Linacre Quarterly editorial advisory board for a number of years. His speech was translated by Prof. Ralph McInerny of the University of Notre Dame.

1. The Animation of Matter

The biologist, in his quest for truth, comes upon a two-fold evidence at the two extremes of the development of a human being — the formed brain and the embryo. What is evidenced is quite simple: spirit animates matter.

Take first of all the macro and micro structure of the brain, from the most complex connecting network that we presently know on earth (measuring 200,000 kilometers in length, if one calculates in neuro-tubules) to that extraordinary play of synapses which causes a flow of particles to be engulfed by the receptive membrane when a small vessel bursts and emits a chemical mediator.

Curiously, our mechanism for eliminating chance and keeping only what is deducible, which is the mark of reason, is a computer of particles with an incredible velocity. In the synapsis itself, particles pass one at a time into each of the channels. Maxwell's demon (imp?) is at the bottom of this system which deciphers and puts order in the universe.

Most wonderful of all, the least thought triggers this flow of ions and this extraordinary counting of particles. Spirit truly animates matter.

At the very outset, when a being begins its carrier, it is genetic information which, accidents apart, dictates all its qualities. According to the felicitous formula of the mathematicians, the being called to life is reduced to its simplest expression.¹ The language is, of course, extremely

1. Note that "essence" precedes "existence" here. Indeed, the coded message of DNA will be transcribed in RNA which will then be altered (remanie). Secondly, proteins which are the machine tools of the cell, will be constructed in conformity with the code of the ARN messenger. In sum, given the translation machine (the cytoplasm) on the one hand and the DNA formula on the other, one could know exactly the "essence" of the new being even before it is expressed, that is, even before its "existence" is recognizable.

miniaturized. Let me give you some idea how much. In the head of a spermatazoid, there is a linear meter of DNA. If one brought together in Rome all the DNA molecules which will define each and every quality of each and every one of the five billion men who will take our place on this planet, the amount of matter would be about equal to two aspirin tablets.

What we know, beyond any possible doubt, is that all the necessary and sufficient information is present from fecundation, that is from the moment when the information carried by the spermatazoid and that carried by the ovule are joined in the fertilized egg.

This idea that spirit animates matter is, in a way, inscribed in our very language. We use the same word for an idea that comes to mind and for a new being coming into existence. In both cases, we speak of a conception. This is not due to the poverty of our vocabulary but to the implicit recognition, if I may put it so, that at the very beginning, soul and body, spirit and matter, are so interlocked that it is impossible to speak of one without the other. Language never has.

This leads us to consider the biologist's first responsibility: to explain to his contemporaries that molecular biology wholly excludes Cartesian Dualism according to which there is spirit on one side and body on the other. There is only animated body, but animated by the nature of man.

A question immediately suggests itself. Are there Instructions for Use, a kind of User's Manual, for this human nature? Is there a natural morality? Were I to express my thought very respectfully, if a bit abruptly, I would say that the Decalogue is the Instructions for Use, and the Commandments of the Church the User's Manual for human nature.

But one would first of all have to establish that human nature does indeed exist. This is fiercely debated. Talk of human nature is not fashionable now and not too long ago it was thought to be demonstrated that the human condition was, in fact, only a kind of convention admitted by one society, but different for another, and there is no way of knowing which is good.

If there is a natural morality, it would be wise to conform to it, not in order to direct science (for natural morality is itself an object of science), but rather to direct the uses of science and to decide on the purpose of the technical applications of our knowledge, and they can be put to good use. Science is indeed the Tree of Good and Evil. It provides both good and bad fruit. Our whole responsibility as scientists is to collect the good fruit and not the bad to offer to our contemporaries and our descendants.

2. From Human Nature to Natural Morality

Of course it is difficult to define human nature; nonetheless, we must try to grasp what it is. For a geneticist like myself, the first step is simply to say, "Well, we know with certainty that this enormous genetic message, 10^{11} of bases in DNA, corresponds to a phenomenal quantity of information. Moreover, we know that it is because the conceived being has this information that it is human. In other words, the most modern and

objective molecular genetics can be summed up in a rough paraphrase of the beginning of John's Gospel. At the beginning was the message. This message is in life and this message is life; and if this message is a human one, this life is a human life." Of course, one must apply himself to decipher this message and that is already underway, but it is not necessary to get into overly technical details on how to read these extraordinary Tables of the Law of life which are inscribed in our DNA.

It would, however, be quite insufficient to consider only DNA. DNA is like a magnetic tape on which is inscribed the symphony of life, but it must never be forgotten that the rest of the fertilized cell is like the magnetophone which will decipher the code and play the symphony. When we speak of the quantity of information expressed in bits, this is not only what is inscribed on the ribbon, but also what is involved in the machinery that reads the ribbon and executes what it means.

Then it is not only some 10^{10} to 10^{13} bits that are involved, but an absolutely enormous number which at present no one can state precisely.²

The first notion, then, is a genetic definition of the being, but for the second notion we must return to our opening remarks on the brain. One need only remove the cranial dome to find in man the frontal areas and the Broca and Wernicke zones that are absent from the primates. These zones are necessary for articulate speech and coherent thought.

Without getting into comparative neuroanatomy, one can perhaps make a rough but nonetheless quite convincing observation. I travel a lot and there are two extremely instructive places I like to visit, no matter where I go — the university and the zoo. In the universities, I have frequently met eminent colleagues who shake their learned heads and wonder if, when all is said and done, their children are not very young types of animal. But at the zoo, I have never seen a meeting of chimpanzees asking if, when all is said and done, their children will not one day grow up and go to the university.

For my part, I conclude that human nature is evident to all. On this planet, man is the only creature who asks himself whence he comes, who he is and how he should treat his brother. He is also the only one to have discovered, (and this from the beginning) that there is a connection between the passion of love and the reproduction of his kind. But neither the most mischievous nor the most upright chimpanzee ever has or ever will know that there is a connection between copulation and the appearance

2. Even if one day this enormous number were estimated (and there is no theoretical reason why it cannot be), there would remain the great difficulty left unsolved by the theory of information. When the length of a message, that is, when the quantity of information it contains, has been measured, one has in no wise measured its "signification." To repeat without error such variants as bla bla bla, ran tan plan, and others, ron and little ron patapon, could require a quantity of information equal to a sonnet of Petrarch. The "quantity" of information in the DNA of a chimpanzee is comparable to that in the DNA of man, yet it is quite certain that the DNA of man means something more — since man speaks.

nine months later of a little ape who resembles him. Man has always known that and the pagans quite rightly represented the god of love in the form of a child. This peculiarity, this knowledge which is, as it were, genetically inscribed in the heart of man, gives to his behavior, and especially to his amorous behavior, a dignity that does not exist in the rest of the life world.

If one agrees that there can exist a natural morality, it follows immediately that to dissociate love from the child and the child from love is an error in method. Hence the quite natural prescription of continual abstinence in the chaste celibate and periodic continence in the happy marriage. If monogamy indeed corresponds to human nature and if morality reserves to the husband the prerogative of being the only one authorized to deposit reproductive cells in the inner temple that is the wife's body, one then arrives quite simply at traditional moral notions. Contraception, which is making love without making babies, abortion, which is the unmaking of the baby, and pornography, which is the unmaking of love, are not in keeping with the natural dignity of man.³

When technology gives us control over the very young human being, over the embryo which can be formed in a quasi-alchemical phial, and even brought back from a frozen state, this natural morality teaches us that young as he might be, as fragile as he might be, the human embryo is a member of our species and by that fact ought to be protected from all exploitation. He is not a stock of spare parts to be drawn on at need. He is not a commodity to be frozen and unfrozen at will. He is not a consumer good for sale or exchange. He is quite precisely our neighbor, our likeness, our brother.

3. Stumbling Block or Safeguard?

It must now be asked if this morality, unchanged throughout time, amounts to an embarrassment for research. That is, is it an unfortunate taboo or, on the contrary, a precious guide? I would not pretend to give an a priori answer. Rather I will examine two examples for you.

The first is respect for the very young embryo, I mean the human embryo. Is this a taboo that retards research? I don't think so. The history of the past three years is very illuminating on this score. Three years ago, our colleagues in England tried to get a law enacted that would permit the

3. The mocking remark that morality is ill placed in the bottom of panties exhibits ignorance of neuroanatomy. The cerebral projection of the genital organs is at the upper extremity of Rolando fissure in the interhemispheric (rillon, sillon?), very close to the limbic system. That is to say, the genital is the *only* corporal representation to be in contact with the center of the impulses that move us: those which aim at our preservation in existence (hunger, thirst, the desire for pleasure) and the preservation of the species (reproduction, production of young, love). It follows that we are so made that whatever concerns the genital directly involves the moral, neurologically speaking. Hence the impossibility of mastering emotive behavior if the will does not intend, and perhaps first of all, conscious and deliberate genital conduct.

experimental use of human embryos not yet 14 days old. I had the honor of appearing before the British Parliament to give a geneticist's opinion. What had been proposed was this. "If you give us the right to use 14-day old embryos we will study different illnesses and obtain knowledge leading perhaps to a cure for mental retardation, cystic fibrosis of the pancreas, muscular dystrophy, Trisomy 21, and hemophilia."

Testifying before the British Parliament, I was obliged to remark in a quite matter of fact way, that one could not study in a 14-day old embryo a disorder in a brain that had not yet formed, nor difficulties of blood coagulation, hemophilia, because the organs which form blood cells are not yet differentiated, nor an anomaly of the muscles which will appear only a week later. Finally, the project in no way enabled one to elaborate a logical basis for saying these experiments are scientifically necessary and absolutely indispensable for the study of the five diseases. I can tell you, and this is amusing, that this extremely simple intervention was very badly received. The scientific weekly, *Nature*, entitled it "A French Influence in Britain." Something quite shocking. *Nature* went so far as to promise a free subscription to anyone who would provide a research project demonstrating the falsity of what I had said. That was three years ago. *Nature* has published no such thing and, to my knowledge, no one has received free that excellent scientific publication.

The truth is that it was not necessary to manipulate human beings, for in the course of these years, the gene of cystic fibrosis has been discovered. The gene of muscular dystrophy has been cloned and the protein it makes, dystrophine, is now known. Great progress has been made in the understanding of Trisomy 21 and hemophilia. Genetic engineering has made the anti-hemophiliac factor in artificially controlled bacteria, blocking one possible means of transmission of AIDS. All this without harming the life of a single premature human being.

At this point, let me simply quote a phrase from our colleagues of the Max Planck Institute who wrote (in *Nature*): "The abuse of these techniques through experiments with human embryos (and pre-embryos if one considers a pre-implantation embryo not to be an embryo), must be condemned by the scientific community." This declaration appeared a few months ago and I take comfort from the thought that scientists in a country where once the unnatural Nazi laws were known now would restore dignity to biology, which is the honest servant of medicine, at the service of the patient, and must never again treat him as an experimental animal.

If respect for human nature is not an obstacle to research, is it a safeguard? I tend to think so. I will take a very recent example under discussion at the present time — the abortive pill, RU 486. It is an anti-progesterone, a false key that blocks the site on which progesterone, the hormone indispensable for the progress of the pregnancy, normally acts. In technical terms, this product is called Mifepristone; in practical terms, it is the first specialized anti-human pesticide. One can imagine,

without any mistake in reckoning, that if this product is industrially manufactured it will kill each year more human beings than were killed by Hitler, Stalin and Mao Tse Tung combined.

Oddly, and I cannot tell you why, this prospect of chemical holocaust, which has been received with publicity fanfare in my country, was just taken off the market by its manufacturer without any precise reason being given. I would like to think that the manufacturer suddenly realized that to eliminate those extremely young human beings with a chemical product is quite precisely the beginning of chemical warfare and that he, a manufacturer of medicines, did not wish to enter on that path. If so, this function of watchman that I think can be recognized in natural morality will have made itself felt.

4. The Way, the Truth and the Life

There remains, however, another question which is in truth the only question. Our power grows by the day. We are going to make new beings (bacteria, vegetables, animals) which have been made neither by natural selection nor by evolution. By that very fact we are certainly going to modify the destiny of man before he perhaps modifies himself. I do not know if we shall be able, during the lifetime of those alive today, to modify the human brain, but no one can show that this will always be impossible. In short, we are going to become more and more powerful. The biological bomb is probably more dangerous for humanity than the thermo-nuclear bomb. Then we will indeed require something to guide us. It will be necessary to establish or rediscover a term of reference, for who can tell us whether this will be good or bad? Who will teach us that?

In my profession as physician and geneticist, such questions arise every day.

Of course there are always some who suggest that we alter morality whenever any innovation seems to require it. This method will not answer because it cannot surmount a decisive difficulty. Technology is cumulative, but wisdom is not.

So what are we left with? Wisdom itself. "That which you have done to one of the least of these you have done to Me." If specialists remember that, science will remain an honest servant of the human family but, if they forget it, if they forget that there exists above all a supernatural morality, one can expect anything from a denatured biology.
