

Paper Title: Roman Church, Philosophy and Science in front of the Concepti
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Abstract

Generally speaking, the Roman Church has been strongly criticized as an enemy of scientific progress. Everyone remembers Galileo, Darwin. Now, she is under attack as a result of her defence of life unborn. Many scientists, who say they speak in the name of Science, argue that the Church is greatly damaging research in many fundamental fields and, in order to defend pre-embryos, is not being sensitive to the illness and suffering of so many people, waiting for new relief that may come as a result of stem cell research. The Roman Church, Magistra humanitatis, would be such an adversary of mankind.

In this paper, I speak about the necessity of completely changing this paradigm. In fact, by means of an evaluation of some scientific facts and philosophical interpretations, I want to show that the Catholic Church speaks just as she does for the fact that she is particularly careful about new scientific advances. So, she is really interested in science and, looking at this, can propose her ethical message.

Too many times, the name of St Thomas Aquinas, who is the highest Catholic thinker, is used in order to show a sort of incoherence in Catholic documents. My paper will finish by elucidating the proper thought of St Thomas and his attention to science that, if related to the present century, would sustain the doctrine of the immediate rational animation of the conceptus. I try to show, then, that Aquinas is, from a certain point of view, inconsistent with his own premises.

Biography:

Fernando di Mieri was born in 1956. After gaining the *Laurea* in Philosophy at the University of Salerno in 1978 he began his academic activity as a *Cultore della materia* at the *Istituto di Pedagogia* first and at the Department of Philosophy successively in the same University. In the meantime he began to teach at the *Istituto Filosofico "San Tommaso d'Aquino"*. Now he teaches Philosophy of Knowledge at the *Studio Filosofico Interprovinciale dei Domenicani d'Italia "San Tommaso d'Aquino"*- Naples. He has been appointed as a visiting professor at the University of Toronto and as Faculty Visitor at the *University of Oxford-Sub-Faculty of Philosophy*. Among his publications, there are the following: *Il "De Institutione Arithmetica" di Severino Boezio* (in "Sapienza", Naples 1983), *Simone Weil e il pensiero debole* (ibidem, ...), *Il Risorgimento di Giacomo Leopardi* (in "Rivista di Studi Italiani", Toronto 1998) and the contributions to the books *La Riforma Gentile* (Rome 1983), *Aspetti della scuola fascista* (Naples 1984) et alii.

The relationship between science and faith has been a major theme of the latest years and di Mieri is going to publish the results of the lessons he gave at the *Studio Filosofico Interprovinciale dei Domenicani d'Italia "San Tommaso d'Aquino"*- Naples.

Paper text

Beyond certain moments, the ontological question on the concepti remains a theme of great interest, above all for its strong psychological, juridical, social, political repercussions. It is necessary to incessantly re-phrase such question, because pushed by new urgencies, from new searches, from new social pressures. If it is so, how can we appraise the ontological statute of the embryo currently? what do they induce us to conclude the most recent theories of the identity or the most recent developments of the theory of the information, the most recent interpretations of the DNA?

In this paper I intend to sustain that the most advanced science conducts to a meeting brought closer with the positions of the Catholic Church, that, in the fidelity to her own general principle of guardianship of the life, really to sustain herself in tuning with the advancements of science has for some verse modified in the time its positions. You think that if for a long time she has been oscillating speaking of the moment of the rational animation, it is decidedly directed, also in absence of dogmatic definitions, toward the full humanity of the unborn since the conception beginning in substantial concomitance with the development of contemporary biology (even if linguistic uncertainties are still sometimes perceivable). Therefore there is a situation paradoxical in appearance, researchers that say to speak in the name of the science are in reality from it distant, while the Church, that holds in the correct account, in sight of her ethical formulations, the scientific conquests, is instead in full tuning with these.

Without hesitation, the point of view from which the theme will be faced is that of the neoscholasticism, that has taken back, elaborating again, many notions important for the understanding of the living phenomenons: power, action, subject, form, deprivation, telos et alii. From this perspective I will deduce to show as, if there exist certain many arguments to underline that the concepti don't have nature of men, the same matters, applied with rigor also to the adult, make to see that also the full humanity of this must be reconsidered. Therefore, if someone wants to be coherent, at least for many cases the one of these possibilities: or the humanity is denied to both, adult and unborn, or it refers to both, also to the conceptus of any stadium. The characters of the personal identity (persistence, somatic accounts, etc.) bring nevertheless in direction of the second possibility.

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Preliminary to every discourse it is an explanation of the notion of nature. This is among the more derided by so much part of the modern thought. To stay within the bioethics Uberto Scarpelli has had expressions to the border of the irony in his comparisons. It is possible anyway, and it is a duty of ours too, to take back such notion, without which every speech is not possible. The definitions of nature are various: "Natura significat quadrupliciter. Primo generationem viventium, id est, nativitatem, secundo, principium intrinsecum cuiuscumque motus, tertio materiam et formam et quarto essentiam cuiuscumque rei". For that that it is interesting in this moment, "nature" it is a common fund, without which the proper characteristic is losen and therefore the recognizability of a certain ens. Aquinas writes: "Natura quoad rationem speciei est aequaliter in quolibet suo individuo, not autem quoad perfectionem individui". Individualizing the nature of a certain ens will mean the possibility of defining, to fix the borders that both the ancient Greek and the Latin, held to constitute the essence of an ens: "Essentia est id quod per definitionem rei significantur". And the dictionaries, of which noone can do to less, don't do anything else other than to furnish us definitions.

What to say then of the embryo? Is he a person or is he a promise of person only? To such purpose it becomes essential to define the term for us so central. It will need to find a definition that enjoys of a credit the amplest possible, that doesn't tighten its borders beneath what the common sense here imposes. Mary Anne Warren, for instance, proposes these characteristics of the person: the conscience and the self-awareness, the ability of reasoning and communicating, the activity self-stimulated. From the absence of these characteristics we can deduce the missed recognition of the person of the embryo. Not only: it suffers their absence also a less fortunate part of the humanity to which we would certainly refuse there, at least the most greater part of us, to deny our connaturality.

Michael Tooley believes that we can speak of "person" at the moment in which an ens has "the concept of a subject of experiences, the concept of a temporal order, and the concept of identity of things over time". These characteristics missing, nobody can pretend for himself or for others "a right to continued existence". Still over: from the moment that "the concept of a right is such that an individual cannot have a right that p be the case unless the individual is capable of desiring that p be the case". From it derives that he is able only to become a subject of rights only he who desires them. And therefore: it is easily realizable how many subjects, also by now living a life extrauterinas would be found in the impossibility to ask rights and, in this case, the most elementary of the rights, that one to life. The newborns, so many mentally ill, et alii. It evidently is not in these terms that the matter can be set. In a so tightly functionalistic vision (at least in the generic meaning of the term) the understanding of the human nature is blocked.

Others believe that the sentient ability is the one for which a subject is fully human: an assumption that lowers dangerously the human dignity. Beckwith responds: "... if sentience is the criterion of full humanness, then the reversibly comatose, the momentarily unconscious, and the sleeping would all have to be declared nonpersons... To claim that a person can be sentient, become nonsentient, and then return to sentience is to assume there is some underlying personal unity... But this would mean that sentience is not a necessary condition for personhood"

In short, the number of the definitions of person is incalculable. Many of them can be said of a generic existentialistic-relational type, but almost all, if used for denying the humanity of the embryo in the first weeks, they consequently fall in the necessity to avoid such recognition also to the adult man. I will recall therefore the very well known classical definition, that written by Boethius in the *Liber contra Eutychen et Nestorium De Duabus Naturis*: "Persona est rationalis naturae individua substantia." This definition will be held in sight, above all because it is very recalled by exponents of the secular self-styled bioethics, for the fact that it gathers that minima around which all men should agree: substantiality, individuality, rationality. It is not possible in this moment to expose, as I should have to do, the fundamental characters of a metaphysics of the ens and the substance to pass then to the specific of the person. I confine only me to recall some notions that result clarifying my thesis. There is a true order of our knowledge, that goes from the apprehension of the ens to non ens; then to division, then unity, finally plurality: "Sic ergo primo in intellectu nostro cadit ens, et deinde divisio; et post hoc unum quod divisionem privat, et ultimo multitudo quae ex unitatibus constituitur" (In X Met., lect. 4) (on the motive for which the division is gathered before the one you see In X Met. Lect. 4.). The individual, in a boethian definition consists of properties non foundable in others. "Individua ergo dicuntur huiusmodi, quoniam ex proprietatibus consistit unumquodque eorum, quorum collectio numquam in alio eadem erit" (In Isag. P. 234). Boethius sustains the centrality of the spatial position to individu-

alize another individual: "Duo enim corpora unum locum not obtinebunt, qui est accidens"¹.

Then I try to recapitulate. In a certain moment, we notice a fertilized ovulo after singamy: what is he? Surely he shows the characters of the living being. How can we consider him in the relationship with his mother that contains him in her womb? If he is not his mother, he has to be unlike under some respect. Certainly also he is an ens but an ens that is not the ens of his mother anymore. (On the fact that the first principle of the plurality is the negation you see Aquinas, *De Veritate*, 2, 15). It is this negation that saves the unlikeness of it. Otherwise it would be comparable to a normal bulge of the maternal body, you want a fingernail or hair, that don't acquire dimensions of autonomous organism. Well, is the zygote another ens? How can we do to say him? We are able considering that it has another virtus essendi. "Esse autem, in quantum est esse, non potest esse diversum: potest tamen diversificari per aliquid quod est praeter esse: sicut esse est lapidis est aliud ab esse hominis"². Naturally it is exactly this we should now study. "Omnis enim nobilitas cuiusque rei est sibi secundum suum esse: nulla enim nobilitas esset homini ex sua sapientia nisi per eam sapiens esset, et sic de aliis"³. Every being is such in virtue of his actus essendi: "Ens sumitur ab actu essendi"⁴. Therefore we can speak of individual, the only true existing reality. Once recognized, we can formulate judgments on it. Now the individual can be taken as what, according to a famous definition, is undivided in itself and divided from the others. It is an intellectual action to affirm and to deny, therefore also to affirm and to deny that something has an individual nature. The error is possible, but it can happen for the fact that the intellect can say of what it is that is not and, vice versa, of what is not that it is. The unborn is clearly an autonomous ens, living, undivided. He can be said rational, since the lowest requisite for such character is insured from the project of formation of the neurological system of it. It has, that is, the power to become evidently rational.

It would seem everything is resolved, yet it is not so simple, because, for example, if the conceptus is undivided, it is not said that, for natural events or because induced, doesn't divide him (in the case, for example of the twin division), and speaking of the same rationality there is he who is not satisfied of a simple project to affirm his existence.

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In the light of these difficulties, we must now otherwise argue for demonstrating the full humanity of the unborn, at least from the singamy on. We must quote some of the principal theses related to the beginning of such humanity. We now have to understand if the conceptus can always respond to such definition or only in some stadiums of his existence. The recent technology of the three-dimensional ecography has shown with great wealth of details the deep humanity of the baby of some months. Images are furnished that make to arouse a deep sense of wonder. No doubt, the greater part of the thinkers, the same world public opinion they seem ready to recognize the full humanity of the concepti since the moment in which he gains the so-called viability, that is his ca-pability to exist out also the maternal uterus. It doesn't miss who sets this phase as a criterion to mark the birth of the humanity. But it is a criterion that cannot enjoy of credibility, because, if the conceptus is all of a sudden able to survive out some uterus also alone, of it that anything of essentially new is happened doesn't derive, it

¹ Boethius, *De Trinitate* I.

² , Aquinas, *Summa Contra Gentiles*, (from here on: SCG) II, 52

³ SCG I, 28 and I, 20 and II, 83.

⁴ Aquinas, *De Veritate* I,1.

doesn't derive of it that in some his deeper nature is for some verse changed. Without counting, as it is well known, that the viability is very determined by the historical-technological conquests of a certain civilization. We need univocal criterions instead. Better therefore to seek different solutions.

There is then the position of many scholars, who believe that the beginning of the cerebral functions coincides with the beginning of the real humanity. Baruch Brody has established a corrispondence among the death, that is given by the cessation of the cerebral functions and the life, that must be coincident (at least that one properly human) with the beginning of the cerebral functions (more or less around the fortieth day, which coincides big way with what the same Thomas properly held at the beginning of the human life, that is rational): "Imagine that medical Technology has reached the stage at which, when brain death occurs, the brain is removed, 'liquified' and 'recast' into a new functioning brain. The new brain bears no relation to the old one (it has none of its memory traces, and so on). If the new brain were put into the old body, would the same human being exist or a new human being who made use of the body of the old one? I am inclined to suppose the latter. But consider the entity whose brain has died. Is he not like the fetus? Both have the potential for developing into an entity with a functioning brain (we shall call this a weak potential) but we can conclude, it seems to me, that an entity can go out of existence even if it retains a weak potential for having a functioning brain, and that, analogously, the fetus is not a human being just because it has this weak potential. What is essential for being human is the possession of the potential for human activities that comes with having the structures required for a functioning brain. It is the potential that the fetus acquires at (or perhaps slightly before) the time that its brain starts functioning, and it is this potential that the newly conceived fetus does not have... ". Beckwith answers with a lot of acumen: "I do not believe that this response succeeds. First, unlike the potential of the corpse's dead brain to be liquefied and recast as a new brain, the unborn's potency to develop within itself... On the other hand, the potential of Brody's corpse is utterly extrinsic... Second, the unborn has 'interest of itself' in a straightforward, non projective way, that go beyond the interests of its component parts... On the other hand, the corpse 'has no interests beyond those of its parts'... In summary, 'the growth of the fetus is in its own interest and is the realization of its intrinsic potential, in which realization its identity is preserved."

For Nathanson, we can speak of humanity beginning from the implantation of the ovum, since it is since then that a form of communication is established between him with the rest of the environment. It is then that "establishes its presence to the rest of us by transmitting its own signals - by producing hormones - approximately one week after fertilization and as soon as it burrows into the alien uterine wall" and in short before the implantation of the fetus "has the genetic structure but is incomplete, lacking the essential element that produces life; an interface with the human community and communication of the fact that it is there."

Also speaking of the position of Nathanson however the all main point comes to find its ontological position beginning from a relationship. The essence however is anterior to the relation and it is not even seen how it can be modified by the opening of a communication.

Let's assemble us on the humanity of the concepti before the fourteenth day, when the primitive streak is not formed. That means creation of an individual distinction, the distinction between right and left. (The fourteenth day is also the limit proposed by the Warnock Report, the most colossal bioethical compromise). If I will succeed to show that also the individual up to fourteen days is man, if I will succeed at least

in instilling a reasonable doubt in such sense, it will be very easier and direct to understand because, for many reasons more, in the following phases the unborn has the right to the recognition of his full humanity and consequently (please, forgive my leap) to the full juridical guardianship.

We know that the conceptus is and is a living being and, first of all, an ens. Aristotle would have said that he is a *tode ti*, a this one, a certain this one. He has therefore some specific characteristics. He is independent, dependent on the functional and existential plan. He maintains a constancy of the inside environment in front of the modifications of his external environment (C. Bernard); he is able at the same time to adapt to the changes of the external environment (Secenov); he knows to self regulate (Cannon: omeostasis, von Bertalanffy: self-regulation). He has an irritability and one "sensitivity for perceptions". The so called School of Santiago has then insisted on the so-called autopoiesis. We may consider the unborn at least as a sometimes open sometimes closed system that ens exchanges information with the outside and to his own inside. Up to this point such ens seems to respect at least the character of the individuality. But it is not so simple.

You know that the unborn is at the beginning a zygote, resulted of the union of the masculine and female gametes, that progressively separates him. The cells, at the beginning totipotent, then lose progressively this characteristic of theirs. Well, this being in phase of cellular explosion can run into the various destinies: he can degenerate or he is able to split down in a twin couple (that is the most frequent case of non single pregnancy). Then he is able to degenerate in a chimera (it goes from itself that he can also continue for what appears to us the most normal walk: the development of a single individual). There is not even any sign of ability. Now is it possible to talk therefore of individuality? How to satisfy the personal requisite that many thinkers want? All these are reasons which would go against the application of the definition of person (in the boethian sense) to the so-called pre-embryo. Who does he show? He is not able surely to underline a rational behavior as we would wait from a boy studying the theorems that the teacher orders him to study. We have only in this phase a being of an increasing number of cells that doesn't show any of the operational signs typical of the rational being, rather, like you, it is even exposed to partitions or fusions. Do we see however if it is the case to recognize to him the human nature (and to this point I ask for not considering specious distinctions the reader like between man and human being and similar). As we do therefore for an operation of this kind? In the *De Ente et Essentia* Saint Thomas exposes the way to proceed for individualizing the proper nature of an ens. Always however he shows the great prudence of the researcher that attentively estimates the limits, unknown to so much part of the modern thought, of the human knowledge. We first of all departs from the operations, from the propriates, then proceeding step by step distinguish among what it appears essential and what instead appears accessory. "[We proceed as if] we passed through of the doors. This is the human way to learn that it passes from the effects and from the *propriates* to the knowledge of the essence of a thing, and since in doing this there must be a certain discourse, the human learning is defined interpretation, although carries on to the knowledge, because the search conducts to the essence of a thing." Never the taking of an ens will be total, but this doesn't exempt us to distinguish what is essential from all that results accidental.

Let's try to study therefore this being that exhibits himself in one accelerated cellular multiplication. It quickly increases in dimensions and it always goes toward one greater specialization. Well, in lack of other signs, the only thing to do is to investigate his cellular structure. It comes out from there that famous argument of the Dna. What to think of this usually reminded argument? Well, as it is normal that is, scientists and phi-

losophers don't show an unanimous consent on the interpretation to give to the Dna. It is strange however that after having been the flag of the antireligious scientists, this revolutionary acid would have become in the opinion of some the weapon with which "metaphysicians and theologians" would maintain the belief in the humanity of the pre-embryo. It is well known that the Dna makes the genetic identity of a certain individual. Are we able to draw from this identity genetic the whole personal identity? Certainly no, but it is sure that it is a conspicuous part of it. There is someone who sustains that the Dna, being a chemical reality, cannot be of some help in an eminently philosophical discussion like is that of the personal recognition of a being. Needless to say that to this point it opens a discussion on the relationship between science and philosophy, that it is everything to investigate, but the alterity looked out upon for eliminating the possibility of use of the Dna is absolutely to contest. Which is the relationship between philosophy and science? Is it possible to clearly separate the conquests of the biochemistry from the philosophical thought? I believe really that the relationship we are speaking about, recognized or less that is, is extremely fertile and organic, as is shown by the major part of the history of the science and the philosophy. It is not however the case to insist too much in the criticism of this opinion, that is a little diffused certainly. We avoid therefore to detain us as for examining instead another point of great importance.

In a famous writing, Bedate, Cefalo and Bole have sustained that not all the informations relative to a certain individual are written in the initial zygote, therefore the argument of the Dna fails and the zygote is not person. Dianne N. Irving writes: "First, 'molecular information' or 'positional information' is not the same as genetic (chromosomal) information. Yet they seem to gloss over this very important scientific distinction, and imply that the two are the same. Second, 'molecular information' itself is coded in the original single-cell human zygote. As the embryologist Moore discusses at great length the genetic information in the original human zygote determines what molecular information will be formed, which in turn determine what proteins and enzymes will be formed, which determines which tissues and organs will be formed. In genetics this is called the cascading effect. That is, the information in the original single-cell embryonic human zygote 'cascades' thoroughly embryological development - each previous direction causing the specific formation of each succeeding direction. Thus, all 'positional' or 'molecular' information or direction is already determined by the information which preceded it, and ultimately by the original genetic information in the single cell human zygote. Third, although the genetic information in the human zygote may direct the absorption of molecules from the mother, that hardly means that the maternal molecules or the mother herself determines the very nature of the growing embryo or fetus which she is merely nurturing (This argument is also rejected by Suarez). The nature of the embryo or fetus, as is empirically known, is determined by the formal biological genetic make-up of the zygote from which he or she continuously develops; and the directing of this absorption of maternal molecules is done by the genetic information from the mother."

Naturally, the Dna is an acid, but with a code and a project. Behind the notion of biological information substitutes of concepts of the tradition Aristotelian-scholasticism are hidden: power, action, end, intentionality. To support this vision of ours we will bring quotations of authoritative researchers, surely not imputable of priestly likings. Maynard Smith for instance writes: "In colloquial speech, the word 'information' is used in two different contexts. It may be used without semantic implications: for example, we may say that the form of a cloud provides information about whether it will rain. In contrast, a weather forecast contains information about whether it will rain... The dif-

ference can be expressed by saying that the forecast has intentionality... How, then, can genome be said to have intentionality? I have argued that the genome is as it is because of millions of years of selection, favoring those genomes that cause the development of organisms able to survive in a given environment. As a result, the genome has the base sequence it does because it generates an adapted organism. It is in this sense that genomes have intentionality. Intelligent design and natural selection produce similar results. One justification for this view is that programs designed by humans to produce a result are similar to, and may be indistinguishable from, programs generated by mindless selection." "Information" appears so, in the interpretation of Berti, very near to Form or soul, a directive principle, not material, but present in the matter and able to act on it, as well as at the same time the final cause.

If the genetic information is present since the beginning, and with it the native project, we have found the element that unifies the man in all the moments of its existence. But if it is so, if the genetic information allows us to overcome all the consequential difficulties from the cellular renewing, then it is understood that it is really it that it allows us to develop the thesis of the personality of the unborn, remembering however, together with Beckwith, that: not every product of the conception is certainly person. The conception is in fact necessary condition, but not enough from this point of view, that is to be able to speak of person.

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We now give to see the classical objections to the personal individuality of the concept. I have already said that many people distinguish among the genetic individuality, that is realized at the fertilization and the full individuality or singleness or unity that happens after the fourteenth day (apparition of the primitive streak). The biological study of the embryo shows therefore with absolute certainty a project and a power (not a simple possibility) to become adult. But what does it want to say power? Is the pre-embryo adult in potential, man in potentia further also? During the evolutionary trial it changes his nature? My answer is: no. "The transition from power to act never changes the nature of a being, but hands rather to the full demonstration of what it is, Following its intrinsic active potentialities, a being can become only what he is already for his nature." These words by Agazzi clarify well the sense of the Aristotelian potentiality.

The same Agazzi, nevertheless, writer in the 1996 of the *Document on the ontological Statute of the embryo* prepared for the Italian national Committee of bioethics, is defender of a sort of delayed ominization. He introduces the concept of "reidentification". He writes: "I make sense of me: I am an individual in a certain way today, but I don't have difficulty to affirm that it was me the child who was in arm to my mother at the age of few days, that was me the fetus entertained in the womb of my mother before I was born, and this even if I cannot make trust on my memory to complete such affirmations. I am able to do this since the actual biological knowledges allow to hold guaranteed these 'reidentifications' of myself in the past. But can I go until where? ". The answer is not that I cannot go over the six days of life of the pre-embryo. And this for the usual reason (possibility of the birth of twins, etc.). Everything is based on a clean distinction between genetic identity and individual identity, that constitutes the foundation to justify the liceity of interventions manipulating the pre-embryo (this author deals with the pre-embryo up to six days). Let's discuss the twin divisions events that are able to happen before the fourteenth day. Well, there is not an accord among the researchers speaking of the explanation of the twinning. Without doubt considerations of genetic order and considerations concerning our incapability to read completely the genetic instructions (the most greater incidence of twin parts must be considered in families that already have some antecedents in such sense) are present here. There are differences on

the ways to follow in order to explain the phenomenon in itself. Beckwith writes: "Some claim that twinning may be a nonsexual form of parthenogenesis or 'parenting'. This occurs in some animals and plants. Others claim that when twinning occurs, an existing human being dies and gives life to two new and identical human beings like himself or herself. Still others claim that since not all human concepti have the capacity to twin, one could argue that there exists in some concepti a basic duality prior to the split. Hence, it may be claimed that at least in burdens incipient form two individual lives were present from the start at conception. In any event, the fact of twinning does not seem to be a sufficient reason to give up the belief that full humanness begins at conception. Second, every conceptus, whether before twinning or recombination, is still a genetically unique individual who is distinct from his or her parents... To help us understand this point, philosopher Robert Wennberg provides the following story: "Imagine that we live in a world in which a certain small percentage of teenagers replicated themselves by some mysterious natural means, splitting in two upon reaching their sixteenth birthday. We would not in the least be inclined to conclude that no human being could be therefore be considered a person prior to becoming sixteen years of age... " (F. Beckwith, *Does Life...*, cit. pp. 3-4). In short, we return to the Aristotelian concept of *tode ti*, as it was said.

In front of the verification of the twin division, the Australian Center of bioethics St Vincent responds: "The fact that the monozygotic twin division can intervene, and that the thing can happen after the formation of the first cell, is not more meaningful than the fact that in theory a person can be cloned at every stadium of his own existence. The possibility of the twin division is not even more meaningful than the normal generation, in virtue of which two people produce another one. The fact that I am able to generate or clone it doesn't remove anything from the fact that I am an individual. The possibility that an embryo in the future divides himself and can form two embryos doesn't alter the fact that the native embryo was an individual that has naturally been cloned forming an identical twin or it is dead during the formation of two new individuals".

Let's attentively reflect however on the operation. We are now back to Agazzi. Very correctly he speaks of reidentification and other cannot be done if the cellular renewal is considered to which everyone is submitted. Agazzi guarantees the continuity of the identity up to the sixth day. Why then doesn't he go up again? Obviously he could have a twin brother naturally, but to this point what can we think? What was that individual, from whose division is produced his/her brother and he thing?

Who was? Which was his end? And (or the possible twin) before six days of the pre-embryo was not he anything else? (and it would be this a beautiful natural strangeness: a being that is not born as everybody) or was it completely reidentifiable in the pre-embryo (which is not more sustainable on the base of the premises of Agazzi of the twin, but it appears at a norm). What can we say about the much more usual case of the single pregnancy? In that case one should be go up again (with this reasoning) to the zygote (the simple natural possibility or induced by the division is enough to say that it is not so?). It is indeed strange this reasoning that from a possibility it derives the right to the experimental abuse.

You sets then a problem typical of the philosophy of the identity, what passes under the name of ship of Teseus. The ancient Greek believed that however all the ships built subsequently, but with component of the preceding ships on above up to the ship of the hero, they were all "ships of Teseus". And it was, in this apparent absurdity, the

most sensible solution. The analogy is very clear. Otherwise we would have the case of an individual that is born at (at least) six days. But what was he before? There is certainly a continuity (and the Dna guarantees), even if sometimes not exclusive. How can we consider the matter? In the walk to the back I can say, was I also me before the six days? If there was not a twin possibility you should certainly say of yes. At least you should be able to say I was also me. And does the pre-embryo die or he separates, or splits himself in two? It is much more reasonable the second hypothesis. Then why speaking in terms of detach when a shared identity is very simpler? If it is so, why would it be permissible to experiment on an individual as to die (exemplary the analysis of Berti of this concept in the lesson of Aristotle)? Only because it is ready to be not one but two people? Here it is evidently to the work a prejudice that has to conduct to the embryos to make available. If instead we adopt the same presuppositions of Agazzi we are forced to say the full humanity of the embryo of six days: shared humanity (like a Siamese cell) even in some exception. From such exceptions he gives way however to also deny the humanity of the ordinary pregnancies. You think to what absurdity! Very less absurdities the ones of the Greeks and their many ships of Teseus.

It goes from itself that the notion of potentia has to correctly be understood. It is linked intimately with those of subject and form and it certainly constitutes one of the motives typical of the aristotelianism, one of the most powerful conceptual tools for the understanding of the becoming. I doubt however that can adequately be understood, if we move from perspectives generically mechanicistic. It is an example of this fundamental misunderstanding a recent article by Ingmar Persson. I will follow him, because he represents a precious example of the reasons for which as very near people to the utilitarianism of Singer is not under the ideal conditions for the understanding of the idea of potentia. Persson brings two typical argumentations of the supporters of the right to life of the embryo. Here is the longest. "(P1) A human zygote (and so an embryo) has the potentiality to become what is undoubtedly a human being i.e., it is in an internal state which will make it become what is undoubtedly a human being if it is allowed to live and develop. (P2) The essentiality of species membership which implies that if something will be a human being in the future if it is allowed to live on, it must be a human being". From here he derives the conclusion of the first moment: "(C1) A human zygote (and I know an embryo) is a human being (in such a rudimentary state that it may be hard to recognise it as such) since the essentiality of species membership rules out that anything can change from not being a human being to being one". Still a passage before reaching the desired conclusion: "(P3) In virtue of being a human being, something has an intrinsic value". Therefore: "(C2) The human zygote (and so an embryo) has an intrinsic value which, as we have seen, is a necessary condition for it to be wrong to use or produces it merely as to means to some end."

In this way Persson brings his objections: the point (P1) can be understood in two different way: or as (P1.1) ("A human zygote has the potentiality to itself become what will undoubtedly be a human being"). Or (P1.2) ("A human zygote has the potentiality to give rise in place of itself to something else that will undoubtedly be a human being"). What Persson intends to show is exactly that (P1) it is true only in the sense (P1.2). On what his reasoning is founded? Shortly on the so-called one "cellular division", that occurs departing from the zygote. Considering this scientific reality we cannot arrive at a potentiality in the sense of (P1.1), that preserve the identity of the bearer. We can maintain only (P1.2), that however doesn't bring the maintenance of the identity of the carrier, since it makes to leave (C1). For Persson it is not worth to sustain that instead of invoking the identity we can be speak of constitution of the individual of cells (p. 511). At this point the limits of an utilitarian formulation are absolutely evident.

If, it is still this the thought of Persson, in the individual surely "human" we have with certainty the presence of ability that the single cells don't have, the same cannot be said of the first two cells. At this intrauterine stadium of the existence we cannot say that there are abilities entirely surpassing the ones of the single cells. The demonstration of this is their totipotence, the ability, for each of them to produce a new human being, if separated by the other and put, as it is clear, under the conditions to be able to continue to live (it is the case of the twin formation monozygote). These two cells don't constitute therefore a true human organism (let's think about the opposite phenomenon to that of the twin division: the chimera). All of this, united to a condition of separation that brings to value what happens in the blastocyst speaking of the cells destined to serve as placenta different from those destined to continue the life that it then will fully be human. This condition of separation, that corresponds then to what is ordinarily said creation of a new authentic individual it is fully had with the gastrulation and the creation of the primitive streak, more or less at fourteen days of life. The unequivocal conclusion of Persson is that at the conception the human being doesn't exist.

The reader will remember however that we have examined until now only the longest argument. In the analysis of Persson is also taken in examination an argument that introduces a lower number of steps. The point of departure is still (P1) that, if accepted brings to hold (P3 *) ("In virtue of having the potentiality to become what is undoubtedly a human being, something has intrinsic value"). It follows the conclusion (C2) ("The human zygote (and so an embryo) has intrinsic value which is necessary to make it wrong to use or produce it merely as a means"). What Persson discusses is note (P3 *) ("The trouble is that the value the zygote has by virtue of this potential to become something intrinsically valuable cannot be intrinsic, as (P3 *) claims, but can only be instrumental, a value as to means of bringing into existence something of intrinsic value, namely what is undoubtedly a human being. This is why it is important that the potential is actualised, and that the zygote does not forever remain to zygote; otherwise the intrinsic value will not as into existence and the instrumental value will be spoilt. This would be true even if, contrary to my argument in section 3, the zygote's potential had been bearer-preserving, that is, even if it had been the zygote itself that later would become an undoubted human being"(p. 515).

The gradualist thesis will be left somehow apart, since I believe that it is easily confutable with a reasoning type Aristotelian (relationship between potentia and actus). The discourse of Persson, that I believe to have reported with enough objectivity, is, in my opinion, dialectically lacking in more than a point. By considering its strong moment, or rather the moment of the first cellular division, the reader will have noticed with how much boldness Persson has sustained the absence of an organic characteristic in the first two cells (to find the scientific name), considered as couple, that follow the zygote. It is true that both of them maintain characteristics of totipotentiality, can give twins or to chimeras, but it is true also that if the things were as Persson sustains we would not succeed, in order to explain the anomalous case, in explaining what normally happens, that is: the two cells continue the trial that will give way to a single living being. How to explain then their commun organizational ability? Is the one so indifferent to the other, as Persson sustains, or is there instead anything that must otherwise be interpreted? If we look carefully at the point, a forma mentis "atomism old style" emerges here, that is ready to see lack of organicity where this one is found at the highest level. We could not justify in fact the development from two cells (so indifferent the one to the other) of a unique, organic entity.

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The same on the other side could be also said for one of the two cells in the relationship with the following ones in the case of twin developments. Besides we have seen that the alternative between "Intrinsic" and "Instrumental" is too hard in Persson. The zygote would have therefore an instrumental value. But tool in the hands of whom? On the other side, the tool also has a finality. In short, only an authentic thought of the finality of the zygote allows to fully understand his nature. Unfortunately, the matter of potentiality is discussed often without the other concept of final cause. This causes a serious limit to the discussion. It is not this the moment to discuss about the rejection or the attempt of rejection of the final cause made by modern sciences, trying then to verify its results especially in the biological disciplines. Nevertheless, all it takes is following to notions that today enjoy of a rather unanimous consent among the researchers, also in the variety of the interpretations. I am speaking about the theory of the interpretation, that resembles a lot from next to some aspects of the old theory of the final cause. Berti has remembered you the strong similarities existing between such theory and the Aristotelical notion of the soul as form. Well, as soon as is set mind to these truths a lot of difficulties are solved. We clarify the motive for which, beyond the apparent cell division, a deep organic unity continue to exist.

All of this shows that exists a project or a design that is progressively realized and that its bearer is always the same. If not so we should, with similar rigor sustain that ourselves, submitted as we are to a continuous cellular exchange could not be identity bearers. This reasoning therefore would also introduce a division inside those people which are surely men, as Persson would say. Needless to say that, with an instrumental view of the embryo, the growing of a child loses every character of continuous and directed gift and will be reduced to technics in sight of a future result. It is not understood well if it is the conception of something that becomes something else objectively showing a continuity and that we must maintain not for himself same, but for his promise to become all that is wanted. This reading of mine of Persson is confirmed by his final positions about the manipulability of the embryo. We never produces embryos for their own sake, that is, without being concerned about whether they can develop any further. Thus, it is to mistake to think that we use or produce embryos as mere means only when we treat them as mere means to novel scientific ends. But, obviously, to use and produce embryos as mere means to the end of having children is permissible. So, using or producing embryos as mere means cannot be wrong" (p. 516). The picture is complete. An instrumental vision of the embryo justified for having a child is the same one of an instrumental vision for the genetic manipulation. As if it were the same to give the life and to suppress him.

Conclusion on a saint at times maltreated, but now always quoted (sometimes in a bad way)

There is by now the mannerism in Italy, where a sour debate is in progress relatively to the law n. 40/2004 (assisted procreation), a debate that obviously involves a discussion on the nature of the embryos, to regularly quote Aquinas, with the explicit intent to show that the Church is poorly consistent with herself, even if her highest thinker spoke of deferred animation (on the rational plan, obviously). So suddenly many many "laicisti" start quoting the Doctor Angelicus (someone, more sensitive to the poetry, doesn't hesitate to quote the XXV canto of Purgatory, to find august references that can justify the vision that put the embryo at disposal of researchers). Anyway, let's try to clarify some points.

First of all, St. Thomas is not the Church, as a matter of fact he was always subdued towards his Roman Mother. Then, we should avoid that Thomas, great theologian and philosopher, can assume, the magisterial function that doesn't compete him. So we can try to exactly understand what he has said.

The thought of St. Thomas

It is well known that St. Thomas has defended the theory of the delayed animation. Naturally the expression gives for implicit that deals with the animation rational, considering that the anima vegetativa is present since the beginning of the conception, on the base of the usual argument: it is necessary that there is a suitable base physics so that the anima rationalis is able to show her functions. It is necessary therefore that the brain is formed, if we want that the rational soul animates its faculties.

Beyond the negligible details (for instance, the number of the days and the differences between males and females) the position of St. Thomas (who, in every case, always qualified as horrible crime the abortion before the suitable days, in spite of the fact that for some days it is not possible speaking technically of homicide) would appear to tightly be congenial to so many positions today prevailing, that could serve to justify the manipulability of the concept, at least within a certain, changing according to the thinker, stadium. On the other side, there are many neo-thomists or, in general, exponents of the Catholic thought that also in the twentieth century have sustained positions similar to those of St. Thomas. Which are the most known quotations from Aquinas that offers a position of this kind? It can for instance be quoted: "The human body ... , not having the soul yet, it exists before the soul: however it then is not human beings in an actual way, but potential only. Instead when it is a human body in actu or rather it is completed by the human soul, it is not neither first neither after the soul, on the contrary coexistent with it." It must be clarified however that "at the moment of the conception there is not still a rational soul in the human embryo. Rather psychic strengths that become subsequently, the one after the other, the soul of the embryo. Nevertheless the first two strengths, vegetative and sensitive, they are specifically already human (unlike the plant and of the animal brute), because they originate from the rational soul of their parents and they build in the embryo a human organism that prepares instrumentally the entrance of the new rational soul."

A question rises at this point. Is it essential, to be thomist, to sustain the deferred animation (in the sense that is said)? And, immediately later: if St. Thomas would return among us, would he still fundamentally sustain anything similar to what he told in the XIII century? Would it be on the positions of a Norman Ford, for instance?

My answer is certainly: 1) no. Rather, 2) if St. Thomas would return to the Earth, careful just he was to the developments of the sciences and the scientific theories, exactly in that Church of which he was devoted faithful, he would sustain the human character of the concept since the beginning with great probability. On which bases I can sustain a thing of the kind? Does St. Thomas track the thesis of the deferred animation in the thought of Aristotle down? Many interpretations are at work. In every case, already for what concerns Aristotle, Enrico Berti has shown the problematic character of the matter of the animation in the various texts. In fact, in the *De Generatione Animalium* he expressly affirms: "He is not able in fact to consider the fruit of the conception as inanimate, absolutely deprived of life, because the seeds and the fruits of the conception of the animals are not inferior to the plants... Therefore it is clear they possess the nourishing soul is clear... They acquire then also the perceptive one thanks to which a being is animal. He doesn't become in fact simultaneously animal and man, neither animal and horse, and so for all the other animals. The conclusion is at last, and the proper character constitutes the conclusion of the formation of everyone." Instead the

same Aristotle writes in the *De Anima*: "The case of the soul is similar to that of the figures, since always in the consequent is contained in potentia the antecedent, and this is worth both for the figures as for the animal beings. For instance in the quadrilateral it is contained the triangle, and in the sensorial faculty that nourishing." Berti comments in such a way: "Here, as is seen, Aristotle affirms that the superior soul contains in itself that inferior, not vice versa; therefore in the human embryo it is had to suppose that is already contained the superior soul to everybody, that is the intellectual, which however it possesses in alone action her ago-coltà nourishing, and potentially that sensorial and that intellectual... You presence in action of a superior soul, which possesses only in power the faculties to it proper, pos-sibile is made by the Aristotelian conception of the soul as 'first action' of a natural body that has the life in power." The interpretation is confirmed by *Metaphysica* IX 7, 1048b 37-1049 to 14; *Met.* IX 7, 1049 to 14-18 and *Met.* IX 7 1049 to 27 - b 2).

If Aristotle used not univocal utterances, let's understand why Aquinas followed the way we know. Speaking of St. Thomas and of the embryo I owe a lot to an article by Heaney (S. Heaney, *The Human Rational Soul in the Early Embryo*) who has investigated how much St. Thomas has written on the subject. "We say that a soul is in a body through a defined form, not in the sense that the form is the cause of its being in the body, but rather the form of the body results from the soul" (*De Spiritualibus Creaturis*). The soul is cause of the body in at least three senses: how principle of moviment as term and essence of the whole living body. Aquinas: "This active power in the seed, that derives from the soul generating, is as a certain movement of the same soul generating... Therefore it is not necessary that this active power has some organ in action" (S.T. I, 118, I, ad 4). Consider that for Thomas the soul is *actus primus*, vivifier and substantial; its operations are only *actus secundi*. The soul is independently from its operations. Then it is possible for a soul to be present even if there are no organs present. Thomas speaks in the page just quoted of the nourishing soul, but it is evident that his argument is good, even if extended to the rational soul.

And here he finds two interpretative levels: a) the one that refers to the positions expressly sustained by St. Thomas; b) the one that refers to the general philosophy and to expressions to be tracked down here and there in the work by Aquinas. Well, without shade of doubt can be sustained what follows: a) surely it doesn't behave some problem for the general acceptance of the thomist principles the adhesion to a different embryology; b) rather, *ad abundantiam*, about the matter Thomas reveals himself inconsequent, he doesn't follow completely the application of his own principles. Why? Christian as he was, he needed to unhook somehow the tallest part of the man from a trial that could merely appear to him biological and he needed to reserve the origin of full humanity instead to a direct and creative action of God. Berti writes again: "... St Thomas had another reason, different from those of Aristotle, to admit that the rational soul was infused at a certain moment of the development: the concept of creation. ... Aristotle ignores the creation instead and proposes, apart the exception constituted by the active intellect, a most unitary conception of the man than that is found in St Thomas." It is not by chance that other religions, wanting to mark the distance among man and others living beings, put the beginning of the intellectual life after the conception. Strange thing, therefore: an attitude that so strongly appears soaked with theology is then used for an attitude of violence towards the life!

If it is so, to be faithful to Thomas, we need to betray his words in this subject, the embryology.

To conclude, the Catholic Church, creationist but sensitive to the science, lines up herself for the humanity since the conception. If the matter wouldn't be in these

terms, she would prepare the theological tools, for giving the scientists free hand on the embryo and however would pay a very tall price: the abdication to an intellectually fertile relationship with the philosophy and the particular sciences, independently of their specific interests of these days.