Freedom of Scientific Research in the Field of Genetics

Roberto Bin[1]

Abstract Although the Italian Constitution contains some specific norms in order to warrant the freedom of research, the most useful test for determining the constitutionality of the legislative restrictions to this freedom are shaped on the model of free speech jurisprudence. The same remark is true also for the limits to the access to funds. In this paper are examined, in a comparative perspective, some recent cases from Italian legislation and jurisprudence. It is also prospected a judicial protection of the collective interest in the "free scientific research."

Key words Freedom of scientific research, Genetics, Right to research

1 Constitutional Protection and Its Limits

Like all modern constitutions, the Italian one contains specific provisions that protect the freedom of scientific research. On the one hand, it is included among the Republic's "cultural values" ("The Republic promotes the development of culture and of scientific and technical research", proclaims art. 9), promising and prescribing a promotional behaviour on the part of state powers in favour of research; on the other, freedom of science is also constructed as a "negative" freedom, guarded from any urge toward *kommandierte Wissenschaft*, of Nazi memory, or *verbotene Wissenschaft*, that is to say, the censorship of the contents of research.

Significantly, art. 33 ("The Republic guarantees the freedom of the arts and sciences, which may be freely taught") is set between two rights, constructed as a complex of "negative" and "positive" instruments: the protection of the right to health, which art. 32 recognises both as the right to medical treatment ("The Republic safeguards health as a fundamental right of the individual and as a collective interest, and guarantees free medical care to the indigent"), and as protection of the dignity of the individual, who is free to refuse undesired treatment ("No one may be obliged to undergo any given health treatment except under the provisions of the law. The law cannot under any circumstances violate the limits imposed by respect for the human person"); and the protection of the right to education, it too is constructed as

[1] Professor of Constitutional Law, University of Ferrara (Italy) .

Bin R., Lorenzon S., Lucchi N..: Biotech Innovations and Fundamental Rights
DOI 10.1007/978-88-470-2032-0_10,

a "negative freedom" of teaching and as a "positive right" to the facilities offered by the state's educational institutions.

Notwithstanding the strong protection that scientific research receives from the Constitution, the Italian system finds itself having to confront the same problems weighing upon freedom of research in other systems, like that of the United States, which does not contain specific constitutional norms on the issue, but protects science by placing it under the same category as other rights, for example, freedom of expression, due process, equal protection, etc.[2] As we shall see, such problems can be efficiently confronted in Italian law precisely through recourse to the interpretative instruments and argumentative strategies borrowed from North American law.

Two main aspects are worthy of consideration. The first concerns the relationship between freedom and the limits of scientific experimentation, the second that between freedom and the right to research funding. The two problems, as we shall see, depart from apparently distant points, to eventually converge upon the same node.

2 Research and Experimentation

All constitutional laws provide an "umbrella" coverage[3] The hard core of the law is at the centre of protection, the point of maximum protection, which diminishes, however, the further you move away from it. Personal freedom, for example, is subject to the most zealous protection when dealing with a person's arrest or his/her submission to a body search, but becomes weaker in the case of fingerprint collection or the search of a bag left on a bench just a few metres' away. Other demands press and compress the protection accorded to the "body" the further one moves away from the core of greatest protection and shifts towards the margin of the "umbrella".

The same thing happens to the freedom of scientific research when it assumes the form of experimentation. "Science is free, as is the teaching of science": this is an unconditional principle that protects the world of ideas and their communication, the so-called "academic freedoms"[4] that allow us to live and operate in environments dominated by absolute pluralism. Experimentation, however, takes us out of

[2] See briefly R. Delgado, D. R. Miller, *God, Galileo, and Government: Toward Constitutional Protection for Scientific Inquiry*, in 53 Wash. L. Rev. (1977-1978), 392 ss.; J. A. Robertson, *The Scientist's Rights to Research: A Constitutional Analysis*, in 51 S. Cal. L. Rev. (1977-1978), 1203 ss.

[3] I developed this metaphor in *Diritti e fraintendimenti: il nodo della rappresentanza*, in *Scritti in onore di G. Berti*, Napoli 2005, I, 345 ss., and, previously, in *Diritti e fraintendimenti*, in Ragion pratica (2000), 15 ss.

[4] See T. I. Emerson, *The System of Freedom of Expression*, New York 1970, 593 ss. On the difficulty to define academic freedom see now E. Barenddt, *Academic Freedom and the Law (a Comparative Study)*, Oxford and Portland, Or., 2010.

the world of ideas, transforming ideas into "things"[5], into activities with neither expressive nor communicative content in themselves[6]. The parallel with the freedom to express one's own thoughts is immediately apparent, since we encounter the same phenomenon when addressing this issue. Courts the world over employ the same line of argumentation: the freedom of expression, long considered the pre-condition of democracy, is subject to limitations. This occurs when it clashes with other important interests (I cannot write my opinions on artistic monuments, nor shout them at night in the streets; I can criticise severely, but without offending the dignity of others), when it ceases to be pure thought and becomes a principle of action (I may not instigate someone to commit suicide or crimes), and when it comes up against restrictions on instruments of propagation of ideas (newspapers, television, forms of electoral propaganda). Thus, my absolute freedom to perform research does not translate into an equally absolute freedom to experiment my hypotheses: it is subject to considerations of safety of people and the environment, reasonable "precautions" concerning the possible, still unknown consequences of the experiments, the protection of the patient's health, the dignity of animals, limitations of facilities and resources.

The voluminous jurisprudence developed by all constitutional systems on the limitations to freedom of expression provides interesting hints for reconstructing the judicial criteria to adopt when evaluating the limitations of freedom of research. Thus, even in countries whose constitutions reserve special rules for the protection of science, there is an inevitable tendency to elucidate the problem by studying the question in the light of the traditional concept of the limits to freedom of speech. What general rules can be drawn?

3 Limits to Experimentation and Controls of Legality

The first rule is that the limitations imposed by law on scientific experimentation cannot be fixed, except in the shape of highly flexible and general formulations that refer the evaluations to be made of the concrete case. Generally speaking, indication should be made of which rights and interests must be taken into account when assessing the admissibility of a given experiment, the procedures to be adopted to decide whether certain methodologies or types of experimentation can be prohibited or limited, the extent of the eventual limits introduced (from total prohibition with punishment, to mere authorisation, or the checking of laboratory conditions), the types of control that may be implemented etc.

---

[5] See G. L. Francione, *Experimentation and the Marketplace Theory of the First Amendment*, in 136 "U. Pa. L. Rev." (1987), 417 ss. "La sperimentazione rappresenta quella sequenza del fenomeno scientifico in cui il ragionamento umano lascia il posto ad un'azione materiale diretta a verificare concretamente la serietà della ipotesi… precedentemente elaborata, ma solo in astratto, dal ricercatore": L. CHIEFFI, *Ricerca scientifica e tutela della persona*, Napoli 1993, 181.

[6] See B. P. McDonald, *Government regulation or other "abridgements" of scientific research: the proper scope of judicial review under the first amendment*, in 54 Emory L.J. (2005), 979 ss.

Such limits can only be set by law, since they constitute exceptions to a constitutional freedom. However, the legislator is not free to impose any restriction of any intensity, as this would represent a compromise of constitutional guarantees. Therefore, laws that introduce limits to research are subject to a process of strict scrutiny, undertaken according to the scheme of a judgement of "strong reasonableness". Firstly, it is necessary to evaluate whether the purpose, and the opposing interests on whose account the restriction to research is sought, are worthwhile. Then, it is necessary to verify *congruity*, that is to say, whether the provision introduced will constitute an efficient instrument for attaining such purpose. Finally, it has to be considered whether that instrument is *proportionate* to the purpose, or whether it instead involves an excessive sacrifice for the freedom abridged.

While this general scheme accurately summarises the judgement of reasonableness in the abstract, when applied to restrictions of research freedoms, it acquires further aspects that make it even more stringent. The crucial point is that political power, i.e. the legislator, is subject to strict limits of intervention, since the freedom of scientific inquiry does not only bring into play the individual freedom of the single researcher, but also the high level of autonomy of the whole scientific community. The legislator is not permitted to intervene in questions of scientific research except on the basis of data collected and accepted by the scientific community itself[7].

The Italian Constitutional Court has very clearly affirmed this principle with regard to medical science, in specific reference to choices involved in experimentation of drugs and therapeutic protocols:

> Intervention on questions of the appropriateness of therapeutic choices must not be born purely of the political discretion of the legislator, but must envisage the evaluation of information resulting from the study of current scientific knowledge and the experimental evidence acquired, by the relevant – national or supranational – institutions and bodies, given the "essential role" played by technical-scientific organisations in such matters … or in all cases must be the result of the said evaluation.[8]

More recently, the Court has reiterated its position, in more general terms, in relation to the law on medically assisted procreation:

> It should be pointed out that constitutional jurisprudence has repeatedly emphasised the limits posed on legislative discretion by scientific and experimental acquisitions, which are in continual evolution and constitute the basis of medicine: thus, on questions of therapeutic practice, the basic rule must be the autonomy and responsibility of the physician who, with the patient's consent, shall make the necessary professional choices.[9]

[7] "These restrictions are not externally imposed to protect legal interests, but rather are conceptually implicit in science and serve as an expression of scientific autonomy": C. Starck *Freedom of Scientific Research and Its Restrictions in German Constitutional Law*, in 39 Israel L. Rev. (2006) 113.

[8] Corte cost., decision n. 282/2002.

[9] Corte cost., decision n. 151/2009.

Also outside the medical field, constitutional jurisprudence is firm in defending the autonomy of the scientific community from legislative incursions that fail to respect the correct balance between it and other possible interests[10]:

> This Court certainly does not intend to exclude that the judicial review of laws, whether in the case of manifest unreasonableness, or on the basis of other parameters suggested by the Constitution, can and must be effected also when a legislative decision appears in contrast to what are held to be a certain scientific information or strong correspondence to the factual situation that the legislator has meant to define[11].

The picture seems quite clear: the legislator must make use of data provided by the scientific world in formulating any prognosis concerning the possible negative effects of certain experiments, and as the basis for assessing the necessity of intervening with restrictions, and the efficacy of the measures formulated. Therefore, the legislator must move within boundaries drawn by science and the prevailing opinion of the scientific community. But it does not stop there, for the legislator is not entirely free to act, either as regards the ends to pursue, or the interests to protect.

4 The "Neutrality" of Public Intervention

At the centre of the constitutional "umbrella" protecting scientific research is the absolute freedom of the researcher to choose his/her subject of study and the theses he/she wishes to uphold. Thus, laws that repress negationism and all other forms of hate speech encounter serious objections to their compatibility with constitutional freedoms, when, instead of confining themselves to repressing behaviours that are concretely able to offend the sensitivities and feelings of individuals, they assume the general form of restrictions on research activities. Once again, in fact, it is not the ideas that constitute a problem for law, but their eventual consequent experimentation: for example, generally respected, high level works on cannibalism exist, but it would certainly not be equally respectable to perform direct experiments to better study the effects of this form of eating practice. Here, opposition takes the form of an ethical objection, whose defence the law assumes. Can we envisage the introduction of prohibitions based solely on the ethical disvalue of the aims an experiment sets itself?

This is a more difficult question, because, if we leave the scientific community free to evaluate the *usefulness* of a certain experiment in terms of knowledge, reliability of results produced, or the therapeutic efficacy of a given protocol, can we also leave it free to assess the *ethical value* or *disvalue* of its activities? The answer must left to the complex reflections of bioethics, upon which I prefer not to dwell here. However, in this case too, it is evident that the legislator tends to take the back seat, leaving the task of case-by-case evaluation to bodies that are thought to possess

[10] Indicative, in this context, is decision n. 166/2004, which declared the illegitimacy of the regional law that banned scientific experimentation on animals.

[11] Decision 114/1998.

specific knowledge of the field of, precisely, bioethics[12]. The legislator retains only the task of codifying the results of such evaluations once they have been reached. Thus, as clearly stated in the abovementioned decision no. 282/2002 of the Italian Constitutional Court, the legislator has the task of transforming into law the results acquired by the scientific community concerning the usefulness and "scientific validity" of a given medical treatment[13].

In other words, the legislator is assigned the power to fix the points of equilibrium in the complex balance between freedom of scientific experiment, conducted under the supervision of the scientific community, and other constitutionally recognised interests, particularly those that may be subsumed into the impalpable notion of "human dignity"[14], whose *extension* is as indeterminable[15], as its *intension* is uncertain. The concrete cases of "degradation of human dignity" are united by a weak "family resemblance", the precise common "essence" of which is impossible to identify. "Human dignity" seems to be a residual argument that can be invoked in the lack of other interests or "named" rights (those regulated by a specific constitutional discipline), in opposition to the freedom of research (or any other freedom that might sit out the other side of the scale). However, the name used to define this argument is so loaded with axiological implications that it has become the favoured abode in which to lodge all the "non-negotiable" values professed by its champions. It is almost as if human dignity, unlike any other principle, right or constitutional "value", were exempt by definition from any form of balancing[16]: human dignity weighs so much that it tips the balance completely, or so some hope.

In the jurisprudence concerning the freedom of speech, the Courts have introduced a very useful criteria to apply to laws that introduce restriction on its modes of exercise. They take account of the effects that the restrictions to the instruments and activities connected to the expression of thought will have on the *contents* of the thoughts: restrictions found to be "neutral" with respect to the thoughts may be permitted, while those that discriminate precisely on the basis of the content are regarded with considerable suspicion[17]. The latter undergo particularly close scrutiny,

[12] The regulations of these boards may appear to introduce a system of licensing incompatible with the constitutional freedoms: e. g., with regards to the federal regulation of the *Institutional Review Boards*, see P. Hamburger, *The New Censorship: Institutional Review Boards*, in Sup. Ct. Rev. (2004), 271 ss.

[13] Also what may be qualified as a 'scientific' work depends on indices defined by the same scientific community: see the *Jugendgefährdende Schriften Urteil* (*BVerGE*, 90, 1, 13).

[14] See again C. Starck, *Freedom of Scientific Research* cit., at 115 ss.

[15] As stated by the *Bundesverfassungsgericht*, whatever the content of the constitutional clause on human dignity, including at art. 1.1. of GG, *offenbar läßt sich das nicht generell sagen, sondern immer nur in Ansehung des konkreten Falles* (*BVerGE*, 30, 1, 25).

[16] "…denn die Menschenwürde als Wurzel aller Grundrechte ist mit keinem Einzelgrundrecht abwägungsfähig": BVerfGE, 93, 266 (293) and in the same terms BVerfGE 107, 275 (284). See, critically, M. Luciani, *Positività, metapositività e parapositività dei diritti fondamentali*, in *Scritti in onore di L. Carlassare*, III, Napoli 2009, 155 ss., 1060 ss.

[17] On this theme see G.R. Stone, *Content-Neutral Restrictions*, in 54 U. Chi. L. Rev. (1987), 46 ss., and, with regards to the abridgments to the scientific inquiry, J. A. Robertson, *The Scientist's Rights to Research* cit., at 1247 ss.

and are permitted only if the restricted content really constitutes a serious danger to universally shared constitutional interests[18].

Like all legal principles, this one does not operate with algorithmic precision. Nonetheless it can be usefully employed also to evaluate legislative restrictions imposed on scientific research, and the results are likely to be interesting.

In the first place, it rules out any restriction imposed to protect values linked to any particular ideological or faith-based vision of "human dignity"[19]. Nothing could be further from the idea of a "content-neutral" restriction. Clarification of this point can be provided by a comparison between two Italian laws that restrict scientific experimentation[20].

The first is the legislative discipline providing *protection for animals used for experimental purposes or other scientific purposes*[21], which imposes a restriction on the *purposes* for which animals may be employed for scientific research (the aim being to prevent experiments for futile objectives)[22], a restriction on the animal species utilised (to preserve the biological equilibrium), and a system of authorization of the respective facilities, which implies a regime of controls over them[23]. Undoubtedly, they are restrictions that affect the freedom of research, but not to the extent of preventing research, or making it extremely difficult. They represent, in any case, "neutral" restrictions in regard to the *content* of the research: although the legislation lists the purposes for which animal experiments are permissible, they are defined in such broad terms as to remove any suspicion that the legislator is motivated by an intention to castigate any particular line of research on the basis of ideological preconceptions or objectives. The only forms excluded are *low value* research or research strongly geared towards economic gain (for example, experiments linked to the cosmetics industry), where the suffering inflicted on the animals seems unjustifiable. On this matter, the Constitutional Court has endorsed the balance struck by the law between constitutionally recognised interests (*the development of research* and *the maximum protection of animals that may be involved in experimentation*): the law identifies "a point of equilibrium of experimentation" that "carefully balances

[18] On this theme see now, with an in-depth analyses of the jurisprudence of the Supreme Court on content-based restrictions of the protection of the freedom of expression, D. M. O'Brien, *Congress shall make no law*, Lanham MD, 2010.

[19] On the inconsistency with the freedom of scientific research of restrictions grounded on *religiöser oder weltanschaulicher Hinsicht*k see the well-known *Hessisches Universitätsgesetz* (*BVerfGE* 47, 327, 385).

[20] I developed this comparison in *La Corte e la scienza*, in *Bio-tecnologie e valori costituzionali. Il contributo della giustizia costituzionale*, edited by A. D'Aloia, Torino 2006.

[21] D.lgs. 116/1992.

[22] Art. 3: "1. The use of animals in experiments … is permitted only for one or more of the following purposes: a) the development, production and testing of the quality, efficacy and safety of pharmaceutical drugs, foods and other substances and products required: 1) for the prevention, diagnosis or treatments of diseases, states of ill health or other anomalies or their effects on humans, animals and plants; 2) for the evaluation, detection, control or modifications of the physiological conditions of humans, animals or plants; b) the protection of the natural environment in the interest of the health and welfare of humans and animals."

[23] With a subsequent law (L. 413/1993) the legislator intervened to protect another interest, the right to conscientious objection of those who find themselves involved in experimental practices on animals.

the respect due to experimental animals and the collective interest in the experimental activities performed on them that are held to be indispensable, on the basis of current scientific knowledge, under both national and community law"[24].

The second law is the well known set of regulations on medically assisted procreation[25]. Concerning this particular aspect of restriction of scientific research activities, the law introduces a general (and legally punishable) prohibition of "any form of experimentation on any human embryo", with the only exception of "exclusively therapeutic and diagnostic purposes … aimed at the protection of the health and development of the embryo itself, and only in the absence of alternative methodologies". It imposes, moreover, a series of more severe prohibitions (also in terms of punishment) to the production of human embryos for research and experiments that have eugenic purposes, practice the cloning of embryos or produce hybrids and chimeras. The prohibition does not only regard research on embryos produced in attempts of assisted procreation, but also those already existing, in surplus, or imported from other countries. As stated in the title of paragraph VI of the law, the rules contemplate "the protection of the embryo" for its own sake, forbidding all forms of experiment on it, regardless of the purpose of the research, even if attaining to the highest interests protected by the Constitution. There is only one exception: research is admissible, even supported, only if it concerns the cryopreservation of "orphaned" or "abandoned" embryos"[26], with the aim of prolonging an indefinable condition, suspended between a life that never was, and a death that cannot exist without life[27].

Such a rigid and general prohibition could only be justified if the experimentation affected were unequivocally prejudicial to noteworthy and widely shared social interests, while not being essential to scientific inquiry; or again, if it were functional to research of such low level as not to withstand comparison with the importance of the interests at risk.

On attempting to verify these conditions, we realise that none of them exist. The interests protected by the norm are those of a generically defined "embryo". The underlying premise is that what is generically referred to as an "embryo" (although technically, a blastocyst), is both "life", and – according to the catchphrase of a well-known slogan – "one of us". But where is the statute for this premise? Can it claim any objective proof, some commonly accepted demonstration, some incontrovertible and universally shared element of truth? The answer is certainly no: the "mysteries" of life and death lie outside the realm of scientific knowledge and hu-

[24] Thus, in decision n. 166/2004, the Court ruled the illegitimacy of the law of the Regione Emilia-Romagna, which had broken this equilibrium by introducing a series of rigid and absolute prohibitions of the practice of vivisection.

[25] L. 40/2004.

[26] As described in the picturesque and anthropomorphic terminology adopted in the Ministerial Decree of 4 August 2004.

[27] Since, as correctly observed, the dilemma surrounding the moral status of the embryo can be reduced to this alternative: "death by being discarded or death by means that salvages the value for future discovery and the potential for providing medical benefit": P. Berg, *Brilliant Science, Dark Politics, Uncertain Law*, in 46 Jurimetrics (2005-2006), at 383.

man certainty; they gravitate into the domain of the "principle of ignorance"[28]. In this domain the law employs the punitive instruments of the state to protect a vision of life and its moral that is entertained by only a limited part of society. It is not a question of whether the part in question is a minority or majority. That is immaterial: in a constitutional and pluralist state, no one, no matter how numerically strong, has the right to impose their own ethical-religious choices on others[29]. No one can force others to abort or to undergo techniques of medically assisted procreation: but, by the same token, no one can prevent others from doing so, except in the name of fundamental interests that are widely shared and, therefore, – one supposes – stated in the Constitution. Instead, the law espouses a much discussed and questionable conception of "life" and "person". The beginnings of life or the moment of formation of the person is neither an object of scientific proof, nor of shared conviction. They are events that evade our direct perception, but Italian law claims to pin them down in an authoritarian way by imposing a "legal regime" with a hard and inflexible impact.

The prohibition of human embryo research is far from content-neutral. On the contrary, it deliberately targets the "content" of research, by imposing upon it a restriction exclusively dictated by an ideological preconception – the *self-elevating mystical conceptions of the beginnings of new human life*, as polemically stated in another, but not dissimilar legislative context[30]. Contrary to what is affirmed by some, a prohibition of this kind does not even serve to protect against the "grave danger" that embryonic research could involve for society's safety: special rules (*ad hoc* production of human embryos, cloning, the generation of hybrids and chimeras) are already sufficient in themselves to protect the interests and "values" thought to be placed at risk should experimental research get out of hand". To ensure respect of such prohibitions, it would be sufficient to introduce a system of authorisation and control of research centres, as is the case in other countries. The existence of a generalised, criminally punishable prohibition, is wholly disproportionate to the stated goal, proving *ad abundantiam* that the real objective is intimately bound with the affirmation of an ideological vision.

Constitutional jurisprudence seems to have arrived at the same conclusion, for it has already declared illegitimate some provisions in which the law unmasks its rigidly ideological face. Although the Court has so far addressed only aspects connected to medical activity, it has reiterated, as a central part of its argumentation, that there are "limits posed on legislative discretion by scientific and experimental acquisitions," since it is they, and not the legislator's political choices, that must

[28] "These are the kinds of issues for which the law, especially in its more intrusive modes, is unsuited – issues of intense moral controversy, involving almost infinite factual variability and constantly changing scientific facts": R. B. Dworkin, *Limits. The Role of the Law in Bioethical Decision Making*, Bloomington – Indianapolis 1996, at 146.

[29] This is the argument used by the American Supreme Court to declare unconstitutional the Texan law that criminalised homosexuality: for the use of this precedent against the legitimacy of a repressive law concerning embryo research see S. Goldberg, *Cloning Matters: How Lawrence v. Texas Protects Therapeutic Research*, in 4 Yale J. Health Pol'y L. & Ethics (2004), 305 ss., 315.

[30] D. W. Jordaan, *Science versus Anti-Science: The Law on Pre-Embryo Experimentation*, in 124 S. African L.J. (2007), 618.

guide a physician's therapeutic decisions[31]. Other objections of unconstitutionality have been raised and will soon be subject to the Court's judgement.

5 Research, Funding, Neutrality

The principle of the content-neutral approach must also guide state institutions when allocating funds for scientific research. The denial of funding for a certain type of research is the same as preventing it from taking place, a situation that is severely damaging to scientific freedom, equality among researchers, and, finally, the collective interest to benefit from research products. This was long ago affirmed by the Italian Constitutional Court in a well known decision in which it declared the illegitimacy of the prohibition to patent drugs, thus cutting off a crucial channel of finance for the "high costs" required for research in that sector[32].

Let us consider the consequences of this principle. It clearly does not imply a right of the single researcher to obtain adequate public funding. Nonetheless, excessive cuts in public spending or significant impediments, whether direct or indirect (for example, via taxation), to private investment might be ruled by the Constitutional Court as going against the constitutionally imposed obligation to promote research. They might also be seen as damaging to the "hard core" of scientific freedom, since scientific inquiry might be so severely restricted as to make it in practice impossible.

Leaving aside this extreme hypothesis, a major aspect clearly emerges from the decision on the patentability of medical drugs. It is that the *principle of equality* prevents the legislator (or any other state authority) from discriminating against any specific research sector, in the absence of a constitutionally endorsed public interest to justify it. Neither can it be just *any* public interest, since, here too, the principles examined above must also prevail: it must have the form of an objective interest, linked to constitutional-ranking principles, corroborated by information from the scientific community, content-neutral, and pursued in conformance to the principle of proportionality: "The government may not deny a public benefit 'for the purpose of creating an incentive enabling it to achieve what it may not command directly"'[33]. Clearly, a state authority cannot be stopped from favouring specific research programmes or establishing spending priorities. However, such choices can never be motivated by politics alone, without the support of the scientific community, or even less be dictated by ideological concerns[34].

[31] Hence, decision n. 151/2009, which declared the illegitimacy of the norm stipulating a maximum number of embryos for implantation in a single operation, while forbidding doctors the cryopreservation of other embryos for use in the eventuality of a subsequent implant.

[32] Decision n. 20/1978.

[33] J. A. Robertson, *The Scientist's Rights to Research* cit., at 1276, quoting *Elrod v. Bums*, 427 U.S. 347, 361 (1976).

[34] "The most basic question is whether the government has merely made an expenditure for a benefit defined by condition or has, in reality, used the condition to create a substitute for the constraining force

In view of the above, the formulation of the ministerial call for stem cell research, in the framework of the national *Programme for Medical Research 2008*[35], is to be considered entirely unacceptable. The list of the projects that could apply for funding concludes by stating *all projects involving the use of human embryo stem cells shall be excluded*. This heavy-handed exclusion was not proposed by any technical-scientific body, nor was it justified as a function of any specific need: it was proposed by a few regional authorities during an state-region government conference, where it was immediately approved by the government representative. What powers do regional governments have in this area? The problem does not regard art. 117 of the Constitution, the rule that regulates the division of legislative powers, but is one that concerns the powers of any political, state or regional authority, in matters relating to scientific freedom.

Several researchers tried to challenge the call, but their claim was ruled inadmissible in both the first and second instances[36]. The motivation was partly a question of form, and partly in open contradiction with the entire line of argument proposed here. First of all, the State Council (the Italian supreme administrative Court) denied the legitimacy of the claim, since the claimants had failed to "formulate and present a research project and an application to participate (albeit destined for exclusion)" – where the clause parenthesis is proof of the formalism of the reasons adopted outside the parenthesis. However, it goes on to add that "the fact that the law permits research on human embryo for therapeutic and diagnostic purposes does not bind the administration to grant public funding for this type of research, since it is at the discretion of the call to establish the choice of the forms of research that can be funded". Is it actually true that administrative discretion can vest a government authority with the freedom to choose which types of research to finance and which not? To me, it seems that the few lines that the administrative judge devotes to the problem completely renege, how consciously I cannot say, on everything that the Constitutional Court has ever said on the matter of the freedom and autonomy of science.

6 Does the "Right to Research" Have a Constitutional Statute?

If we listen to the State Council, researchers do not have a legally relevant interest in procuring funding for their research (or rather, in seeing themselves excluded without motivation from funding because of the subject of their project): but does the

of law. In less abstract terms, the issue is whether the government's conditional spending amounts to a purchase or a regulation": P. Hamburger, *The New Censorship* cit., at 319.

[35] The text is available at www.salute.gov.it/bandi/documenti/Bando_cellule_staminali.pdf.

[36] The claim and decision of the administrative judges are available at www.unipv-lawtech.eu/il_non_finanziamento_della_ricerca_che_utilizzi_ce.html

collectivity have one? Does there exist, on the part of individuals or the collectivity, a right to science, the "right that science should be practiced"[37]?

The Italian Constitutional Court has on occasion acknowledged an appreciable "constitutionally recognised interest of scientific research"[38], usually linking it to a strict instrumental nexus with the right to health[39]. It is an interesting relationship that merits our attention.

Since the freedom of research is construed as a special and (according to some[40]) "privileged" sector of the freedom of speech, and as such in close relationship with the freedom of teaching (and, in other respects, to the freedom of worship), it lies in the area of traditional "negative" freedoms. The current stereotype sees them as substantially resting upon the understanding that the State and its apparatus shall abstain from imposing restrictions on or obstacles to them, unless in order to protect other constitutionally recognised interests. Even if we extend the perspective to encompass research funding – that is, to the regulation of the resources in practice indispensable for the exercise of such freedom – the "constitutional right" that is recognised and protected is attributable to the single researcher, or the institution in which he/she operates. The envisagement of protecting the collective interest in scientific research, or the interest each of us claims in enjoying the products of research, remains an eccentric perspective. Nevertheless, the relationship between the freedom of research and the right to health seems to mark a meeting point between these two perspectives.

The right to health is, at the same time, both a collective interest and an individual right, both of which are vested with the power to claim services of public institutions. It is a "primary subjective and absolute right, which is valid *erga omnes*, and perfect, that is directly enforceable before legal authority without the need for legislative intervention, being protected by a direct and explicit constitutional norm"[41].

Can this right be extended to the point of legitimating a sick person's claim to benefit from the results of scientific research? In the much publicized *Di Bella case*, the Court seems to propend towards a positive answer. Certainly, the case in question

[37] As previously argued by A. Orsi Battaglini, *Libertà scientifica, libertà accademica e valori costituzionali*, in *Nuove dimensioni nei diritti di libertà* (Scritti in onore di Barile), Padova 1990, 89 ss., 98.

[38] Decision n. 201/1995. Elsewhere the Court has included research among "essential common goods" (Decision n. 500/1993) and has referred to it as a "constitutionally safeguarded value such as scientific research" (Decision n. 423/2004, echoing numerous other rulings in regard to the divisions of State and Regional powers).

[39] This is the case not only in the previously mentioned Decision n. 20/1978, but also, for example, in Decision n. 569/2000 (where the Court rejects the censuring of a provision of the Regione Liguria, in favour of promoting, research and clinical experimentation activities, on the part of the Regional Department of Genetics, citing its "constant jurisprudence … according to which activity of diagnosis and hospital treatment of the sick is not only not incompatible, but on the contrary, is susceptible of being intimately linked to, or even "at one" with the activity of scientific research")

[40] On the theory of "privileged" forms of freedom of expression see critically A. Pace & M. Manetti, *La libertà di manifestazione del proprio pensiero*, in *Commentario della Costituzione*, edited by G. Branca, Bologna Roma 2006, 54 s.

[41] C. Tripodina, *Art. 32*, in *Commentario breve alla Costituzione*, edited by S. Bartole and R. Bin, Padova 2008, 322.

was extreme[42], but the Court's considerations are of major importance. It recognised that neither the legislator, the judges, nor the Constitutional Court itself could pronounce on the treatment's validity. Instead, the Court took as its starting point the "legislative fact" that the law had sanctioned a free experimentation of this treatment, reserved to a limited number of patients: the Court confines itself to contesting the legitimacy of this restriction, which excluded from the free experimentation other patients also faced with "extreme and impellent therapeutic needs and without alternative answers". The Court reached its decision by reasoning on the basis of the principle of equality, but it recognised that the undue discrimination among patients actually related to their enjoyment of a "fundamental right", "considering that the discipline of the experimentation, as envisaged, undoubtedly yields *expectations included in the minimum content of the right to health*".

Can we extract more general considerations from the now far off precedent? Undoubtedly much caution is advised. The specific character of the *Di Bella case*, from the strictly juridical viewpoint, lies in the fact that it centred upon a specific legal norm that limited access to a certain judicial regime (the "freeness" of the experiment), to which other individuals wished to accede. Therefore, the issue was one of access to a scientific experimentation, in the hope of benefiting from its results, access to which was restricted by the legislator. However, the Constitutional Court did not refuse to accept the expectations of the experimental research results as a "fundamental right", placing them among the essential content of the right to health. And this line of reasoning seems to have further ramifications.

The history of the evolution traced by the protection of fundamental rights in constitutional jurisprudence shows how, in several circumstances, the safeguard of the private citizen's "negative" freedom has progressively extended to include the protection of collective interests that could benefit from that right. Thus, ultimately, the interests of the collectivity may indeed be embodied within the right of every one of its members. The "negative" right of the freedom of teaching, for example, has fused with a general interest in education, and this has subsequently been translated into a right of each and every one of us to have access to teaching and the benefits of education[43]. Freedom of expression has also mutated into a general interest in information and this, in turn, has become an actual "right to information", which requires the positive intervention of public institutions, at least to provide a guarantee of information pluralism[44].

[42] The issues addressed by the Court in the Decision n. 185/1998 concerned the legitimacy of a legislative act that limited access to a free experimentation of a group of substances constituting a "multi-treatment" of cancers. The Court declared it illegitimate "… insofar as it does not envisage the provision on the part of national health service of the drugs employed in the treatment of tumoral pathologies, for which the experiment was set up, … to those who are in an insufficient economic condition, according to the criteria stipulated by the legislator, but are within the objective, subjective and temporal limits mentioned in the motivations", that is to say, terminally sick patients.

[43] See U. Pototschnig, *Istruzione (diritto alla)*, in *Enc. Dir.*, XXIII (1973), at 96 ss.

[44] On the predictability of a subjective right to information see A. Pace & M. Manetti, *La libertà di manifestazione del proprio pensiero*, cit., at 346 s. (authors acknowledge the existence of a subjective (and legally enforceable) right of the individual to obtain information of interest to him/her only with regard to certain subjects, and "only in the extent to which the normal transmission of information is

Clearly, it would be an arduous task to found constitutionally an explicit recognition of a directly enforceable subjective right to scientific research and the enjoyment of its results. However, I do not intend to study the theme in such terms. The question is whether the individual, suffering from a disease that can only be treated with genetically based therapies, can act to protect his/her *right to health* by calling for a removal of restrictions to research and scientific experiment that take away those *expectations included in the minimum content of the right to health* mentioned by the Court in the *Di Bella case*. There can only be one answer: it depends on the case. An unexpected concrete circumstance can always arise in which the private citizen finds him-/herself directly damaged by the prohibition of a particular form of experimental research, or by restrictions set in place by public authorities to the admissibility of certain research projects. And his reaction might be to obtain recognition via recourse to the judge and the Constitutional Court. In the meantime, however, there is no lack of other more immediate and less hypothetical methods, since the broad legal legitimation now accorded to consumer organizations and associations that defend the rights of the sick, could act to demand that the legislator's scale of interests should also finally take account of the collective interest in the freedom and development of scientific research.

culpably prejudiced in his/her specific regard". In other words, particularly in a system like the Italian one, where freedom of expression is not "functionalised" to the formation of a free public opinion, one cannot configure a subjective right to information as deriving from art. 21 Cost., but only in terms of a specific legal discipline (e.g. the one regulating televised broadcasting).

For a comparative approach to the relationship between freedom of information and the right to be informed, see E. Barendt *Freedom of Speech*, 2nd ed., Oxford - New York 2005, 108-112.