Feyerabendian pluralism in practice: Lessons from the Di Bella case

Luca Tambolo, Gustavo Cevolani

Abstract: This paper contrasts two ingredients of Feyerabendian pluralism: the idea that the proliferation of theories and methods is good for science (the "limited pluralism" view) and the view of knowledge as an ever increasing ocean of mutually incompatible alternatives (the "oceanic" view). We argue that, in order for Feyerabendian pluralism to be tenable, the limited pluralism view should be decoupled from the oceanic one, and the latter rejected. We use as a case study that of Luigi Di Bella, an obscure Italian physician who in 1997-1998 suddenly became a national celebrity as the self-proclaimed discoverer of "the cure for cancer". When the case erupted, no evidence of the efficacy of Di Bella's unconventional approach to cancer treatment was available, and the relevant experts concurred that the so-called "Di Bella method" (DBM) did not show any promise. Yet, the Parliament passed a piece of ad hoc legislation authorizing a series of phase II state-funded clinical trials aimed at assessing the DBM. Asking what course of action a Feyerabendian pluralist would have recommended in this scenario allows one to probe into the – limited, as it turns out – validity of some of Feyerabend's views on theoretical pluralism.

Keywords: Feyerabend, Theoretical pluralism, Limited pluralism, "Oceanic" pluralism, Di Bella case.

1. *Introduction*

Feyerabend passionately championed a strong pluralism concerning science, its theories, and its methods. In doing so, he defended both the view that genuine knowledge requires the proliferation of alternatives to the dominant theory, even when the latter enjoys an impressively high degree of support (to which we refer as the "limited pluralism" view), and the view of knowledge as an ever increasing ocean of mutually incompatible alternatives (the "oceanic" view). Both of these views provided important arguments for Feyerabend's no less passionate criticism of experts who, by virtue of their alleged excellence in some domain of scientific inquiry, demand a privileged role in democratic policy-making – a demand against which he railed especially in *Science in a Free Society* (1978). It is an open question whether and to what degree appropriately modified versions of Feyerabend's views on the importance of pluralism and

philinq XII, 1-2024, pp. 145-161
ISSN (print) 2281-8618-ETS doi: 10.4454/philinq.v12i1.556
Submitted: 4 June 2024
Accepted: 17 August 2024

the proper role of experts in public decision-making can be combined within a satisfactory account of expert policy advice (see, e.g., Brown 2021; Bschir *et al.* 2022; Shaw 2021). With a view to contributing to the ongoing discussion on such an issue, in this paper we focus on a historical episode that provides one with excellent material to probe into the validity of some of Feyerabend's views on theoretical pluralism: the so-called "Di Bella case".

In a nutshell, Luigi Di Bella was an obscure Italian physician who, at the end of 1997, hit the media headlines as the self-proclaimed discoverer of no less than the cure for cancer. A harsh critic of approved cancer treatments, Di Bella fueled a national controversy concerning the respective merits of chemotherapy, to which he disparagingly referred as the product of "official oncology", and of his unconventional therapeutic approach, for which he was unable to offer evidence of safety and efficacy. Although very heated, the controversy was short-lived, especially in comparison to the well-known case of laetrile (see Markle *et al*. 1980): already by late 1998 the support of media outlets that at the end of the previous year had made Di Bella an instant celebrity was a thing of the past, and Di Bella quickly disappeared from public view. A most remarkable feature of the case was that in response to the widespread popular support gained by Di Bella, at the beginning of 1998 the Parliament authorized – against the advice of the relevant community of scientific and medical experts – a series of clinical trials aimed at testing Di Bella's treatment.

In such a scenario, we argue, Feyerabendian pluralists could easily have found themselves on the wrong side of the fence separating Di Bella's supporters from his critics. More specifically, we show that Feyerabendian pluralists could have found themselves in agreement with the troublesome decision to authorize the trials of the "Di Bella Method" (DBM, for short) – namely, experiments on human subjects conducted in spite of the fact that there was no reason to presume the DBM's efficacy. As we argue, this suggests that in order for Feyerabendian pluralism to deliver the goods that Feyerabend quite correctly claimed it can help us to achieve, one should decouple the limited pluralism view from the oceanic view of knowledge, espoused in Feyerabend's writings at least since the mid-1960s (e.g., 1965/1981; 1975; 1993).

We proceed as follows. In Section 2 we summarize the facts of the case, emphasizing in particular the status of radical alternative to the dominant theory that Di Bella claimed for his approach to the treatment of tumors. In Section 3 we show that based on the limited pluralism view, revolving around Feyerabend's pluralistic model of theory testing, Feyerabendian pluralists would have disagreed with the decision to authorize the trials. However, the oceanic view requires one to drop any condition of factual adequacy of the alternatives to the dominant theory that one welcomes to enter into a scientific discussion.

As we show in Section 4, based on the oceanic view, Feyerabendian pluralists would have agreed with the authorization of the trials. This, we argue, speaks strongly against such view. In Section 5 we discuss a possible rebuttal of our analysis on the part of Feyerabendian pluralists, based on the distinction drawn by Feyerabend between "respectable thinkers" and cranks. The distinction is of course pretty sensible but, as we argue, it does not impinge on our claim that the oceanic view should be dropped. In Section 6 we offer some brief concluding remarks.

2. *A crash course in the Di Bella case*

Luigi Di Bella (1912–2003) was 85 years old when he became a national celebrity. A medical doctor and retired professor of Physiology at the University of Modena, until late 1997 Di Bella was unknown to the general public. His rise to fame, as sudden as unexpected, was due to his proclaimed ability to treat cancer with the DBM – the "Di Bella Method" or "Di Bella Multitherapy" – that he himself had invented and claimed to have perfected over the decades on the patients of his private practice.

Di Bella advertised the DBM as an approach to the treatment of tumors exhibiting much higher levels of safety and efficacy than the current standards of care, especially chemotherapy – which he harshly criticized. In fact, in Di Bella's own words, the DBM revolves around the idea that, unlike in chemotherapy, one should aim at "promoting the biological conditions conducive to preventing further proliferation of neoplastic cells without destroying the pre-existing ones" (Di Bella *et al*. 2012: 248). An appropriate combination of substances, administered by the treating physician based on their clinical judgment concerning the situation of the individual patient, is supposed to block the production of the growth hormone, which Di Bella viewed as one of the most important factors responsible for the formation of neoplastic cells. In the favorable conditions created by the administered substances – to which many referred as the "Di Bella cocktail" – "the destruction of neoplastic cells takes place thanks to the competition instituted between the healthy cell, which grows, and the inability of the neoplastic cell to exploit the resources available" (Di Bella *et al*. 2012: 248).[1]

In 1997 the relevant scientific and medical communities were unaware of the DBM, since no body of scientific literature described it or suggested,

[1] This summary of the basics of the DBM was offered by Di Bella during a public event in Parma on April 4, 1998. Di Bella's words have been very aptly chosen and translated into English within the piece from which we quote, written for his centennial and co-authored by his sons Giuseppe and Adolfo. For a systematic presentation of the DBM see, e.g., Di Bella (2010).

let alone documented, its alleged safety and efficacy (a situation that hasn't changed in the meantime).[2] But Di Bella had by then built for himself a solid if underground reputation, within a following of devoted patients, as a specialist in the treatment of tumors. And the DBM became the subject of a heated national controversy after groups of organized patients staged public demonstrations calling for the Italian government to include somatostatin and ocreotide – both ingredients of Di Bella's cocktail – in the list of drugs provided free of charge for the compassionate treatment of patients with all types of tumor (in that moment, somatostatin and ocreotide were provided for free only for selected indications, for which evidence was available). Had the request been granted, the Italian National Health Service would have been bound to provide somatostatin and ocreotide for free to all cancer patients, thereby resolving the demonstrators' main discontent: because of the high cost of somatostatin, which in public discourse became the "flagship drug" of the DBM, treatment with the DBM was in fact inaccessible to many who would have wanted it. For the government, however, accepting the request would have amounted to overruling a number of decisions, roundly criticized by the demonstrators, issued based on the available evidence by the National Drug Committee between 1996 and 1997.

The national media jumped on the story in mid-November 1997, and covered it in real time in countless TV and radio news and broadcasts, as well as in literally thousands of newspapers and magazine articles. More or less at the same time, various local judges started to order health authorities in different parts of the country to provide somatostatin for free to cancer patients requesting it. And the now suddenly widespread conviction that the safety and efficacy of the DBM was a matter of course received support also from some opposition parties, wishing to use popular discontent with the difficulties faced by patients who could not afford the costs of the DBM as a means to attack the government. All of this happened in spite of the fact that in November 1997, there was no publicly available evidence suggesting the efficacy of the DBM (or ruling out its toxicity, for that matter), only Di Bella's and his followers' claims. Yet, much to the worry and dismay of scientists and clinicians, an unknown but sizable number of patients abandoned approved treatments in favor of the DBM. In light of such a development, of the fact that Italy had become a country divided between supporters and critics of Di Bella and his method, and of the request from many quarters to subject Di Bella's claims to proper

[2] To mention but one instance, Ernst (2021: 113) includes the DBM in his list of "so-called alternative medicine" (SCAM) for cancer and comments: "Even though Di Bella published several further investigations, there is still no sound evidence that this treatment is effective in any type of cancer". The "further investigations" to which Ernst refers, published after Luigi Di Bella's death in 2003, are mainly due to Giuseppe Di Bella.

scientific testing, the government quickly, albeit reluctantly opened the door to the possibility of a state-funded experimentation of the DBM.

To cut a convoluted story short, in February 1998 the Parliament passed a piece of legislation authorizing a series of phase II clinical trials – which started in March of the same year – aimed at testing the safety and efficacy of the DBM. The results of the trials, published in the *The British Medical Journal* in 1999, infuriated champions of the DBM, which the experimenters deemed not promising enough, in terms of its efficacy, to warrant further clinical testing (Italian Study Group for the Di Bella Multitherapy Trials 1999). To this day, the circle of Di Bella's heirs and supporters claims that the trials were a fraud orchestrated by the scientific and pharmaceutical establishment owing its prestige and wealth to the dominance of chemotherapy, and therefore hostile to the DBM, and denounces flaws both in the design and in the execution of the experimental work (see, e.g., Di Bella 2012: 391-408). Di Bella himself openly voiced his complete distrust of the experimenters even before the trials took place. For instance, when his first biographer asked him whether he thought that the trials would warrant a fair assessment of the DBM, he replied by noting that "the field of oncology is dominated by chemotherapists. They are natural enemies of my method, since it radically questions theirs" (Di Bella *et al.* 1998: 8). In any case, after some preliminary results of the trials were announced by mid-1998, popular support for the DBM quickly waned, and by late 1998 Di Bella had lost the prominence on the public scene that he had gained only a year earlier.

What matters for our present purposes, though, is the very fact that the trials were performed. As already mentioned, in 1997 there was no publicly available evidence suggesting the safety and efficacy of the DBM. And of course, extant legislation provided that before starting clinical experimentation of any drug or treatment, one needed appropriate evidence in hand, indicating at least its safety and possible promise. Thus, in December 1997 Minister of Health Rosy Bindi ordered Di Bella to turn in a sample of the records of patients which he claimed to have treated with the DBM over the decades, contained in his archive, in order to ascertain whether the conditions for authorizing the trials obtained. Di Bella begrudgingly complied and handed in a sample consisting of less than one hundred items.

In the view of the experts who examined the records of Di Bella's patients on behalf of the Ministry of Health, auditioned by the relevant Committee of the Chamber of Deputies in January 1998, the conditions for authorizing the trials did not obtain,[3] since nothing indicated the possible efficacy of the DBM

[3] See, e.g., the remarks by members of the National Cancer Advisory Committee and of the National Drug Committee in (Minutes of the January 15, 1998, Parliamentary Hearing: 52 and 60 respectively).

– which Di Bella on numerous occasions advertised as effective in about the 90 per cent of the cases. In spite of this, the government ended up supporting the decision to subject Di Bella's claims to experimental scrutiny. Bindi, auditioned by the same Committee a few days after the Ministry's experts, pointed out that of course, the path followed to get at the eve of the approval of the trials was "in a certain sense anomalous" (Minutes of the January 20, 1998 Parliamentary Hearing: 86). In fact, no drug manufacturing company had requested a trial for any of its products, nor had Di Bella demanded an experimentation of the DBM. It was in response to public pressure on the government, Bindi emphasized, that the Ministry of Health had started to search for reasons to justify the trials. And in Bindi's view – plainly contradicting that of the experts – such reasons had been found after all. Nevertheless, Bindi remarked, the authorization of the trials had of course much to do with "what we can by now define a social issue" (Minutes of the January 20, 1998, Parliamentary Hearing: 88), namely, that of cancer patients abandoning approved treatments in favor of the DBM.

Admittedly far from providing the reader with an exhaustive reconstruction of the episode, our summary sets the scene for asking how a Feyerabendian pluralist could have dealt with the Di Bella case. More specifically, we wish to ask whether a Feyerabendian pluralist would have been in favor or against the authorization of the trials of the DBM.

3. *The limited pluralism view vis-à-vis the Di Bella case: do not authorize the trials*

Scholars have long emphasized that Feyerabend's occasional defenses of unorthodox positions and doctrines should not be taken at face value (Lloyd 1997/2000).[4] Yet, there can be no doubt that Feyerabend vociferously defended pluralism throughout all of his career. In a number of landmark essays published in the early 1960s, he put forward the principle of proliferation: a good empiricist should invent and elaborate alternatives to the theory that happens to be the dominant one at any point in time, no matter how favorably the relevant scientific community views the dominant theory (see, e.g., 1963/1999a; 1965/1981). Towards the end of the 1960s, Feyerabend came to view the proliferation not only of theories, but also of the methods used by scientists to appraise them as necessary for pluralism. In *Against Method* (1975), he therefore supplemented his earlier plea for theory proliferation with the

[4] To mention but one instance, the precise significance, as well as the merit, of Feyerabend's infamous advocacy of astrology in *Science in a Free Society* (1978: 91-96) has been the subject of quite some controversy in recent years (Kidd 2016a, 2016b; Pigliucci 2016a, 2016b, 2016c; Shaw 2017).

defense of methodological pluralism – that is, the proliferation of methods or, as he provocatively put it, anarchism. Moreover, Feyerabend's pluralism extended well beyond the domain of the methodology of scientific inquiry: starting from the 1970s, he forcefully argued that various non-scientific ways of investigation provide their practitioners with genuinely valuable insights into the workings of nature (see, e.g., 1987). And what matters the most for our present purposes, the DBM exhibited some of the features that Feyerabendian pluralists are bound to find attractive in an alternative to a dominant theory.

For a start, Di Bella himself described the DBM as a radical alternative to chemotherapy: while the latter targets neoplastic cells, the former aims at the creation of a situation in which healthy cells proliferate and manage, so to speak, to "overcome" neoplastic ones. Second, Di Bella's therapeutic approach revolved around the alleged identification of the mechanism responsible for the proliferation of neoplastic cells. In fact, as mentioned above, Di Bella viewed the production of the growth hormone as one of the main causes of cancer – a causal claim not supported by the evidence available back in 1997 (or by the evidence emerged since then). Sure, the DBM did borrow elements from current cancer treatments. For instance, synthetic analogues to somatostatin had been approved for the treatment of so-called "apudomas", a group of heterogeneous tumors arising from the diffuse neuroendocrine system. Di Bella, however, recommended somatostatin (together with the synthetic analog ocreotide and the other substances included in his cocktail) for the treatment of *all* tumors, not just of apudomas – a recommendation based on his account of the mechanism that causes neoplastic cells to proliferate. Moreover, to this day Di Bella's followers claim that the "official" statistics documenting the efficacy of chemotherapy are simply a fraud, and that chemotherapy does not cure, but rather kills patients (Di Bella 2012: 391-408).

Of course, it is precisely the lack of a highly effective treatment for all kinds of tumor that creates the space for the emergence of what Ernst (2021) dubs "so-called alternative medicine (SCAM) for cancer". In the case of Di Bella, the alternative to the dominant if largely imperfect therapeutic approach was not only theoretical, but also methodological. In fact, while emphatically insisting on his own scientific credentials – he claimed to have been shortlisted for the Nobel Prize in Medicine – Di Bella rejected methods for the appraisal of drugs and treatments that, post-World War II, had become a staple of a scientific approach to medicine. In particular, Di Bella consistently denied that statistics and randomized controlled trials are methods that allow one to properly assess the safety and efficacy of a drug or treatment.

Auditioned by the Committee for Social Affairs of the Chamber of Deputies in January 1998, Di Bella claimed that, "based on a rough calculation", the

material contained in his archive of record of patients was "more than enough to confirm what I am saying, that is, the efficacy of this treatment" (Minutes of the January 14, 1998, Parliamentary Hearing: 19). Indeed, Di Bella lost no occasion to brag about the successes achieved by the DBM, which he declared effective in 90 per cent of the cases, and he and his sidekicks insisted that at least ten thousand patients had undergone treatment with the DBM. Concerning the possibility of a statistical elaboration of the information contained in the medical records kept in his archive – which many demanded, as one of the means to assess whether or not the DBM was a promising approach – Di Bella agreed that the task, in which he himself had not engaged, was certainly feasible. He however hastened to add: "for what statistics is worth, given the enormous variability of the substrate on which the very therapy has acted" (Minutes of the January 14, 1998 Parliamentary Hearing: 19). In other words, Di Bella viewed such tools as protocols, statistical analyses, controlled studies, etc., as utterly inadequate to the purpose of assessing the DBM. The son of a bygone era of medicine, Di Bella regarded current methods to scientifically test drugs and treatments as either worthless or, worse, potentially misleading, since in his view, the clinical eye is all that really matters: the oncologist "ought to be an internist among the most endowed one can imagine, because he has to be able to unveil and interpret what happens in the organism of the patient" (Di Bella *et al*. 2012: 248).

In short, it is safe to say that Di Bella defied what he disparagingly called "orthodoxy" both at the theoretical and at the methodological level. The question then arises of how Feyerabedian pluralists would have dealt with the case. Would the embrace of theoretical and methodological pluralism, as Feyerabend understood them, have led to recommend the authorization of the trials?

Let us start pondering this question by recalling that in the early 1960s, Feyerabend made a name for himself as the critic of a set of ideas concerning theory testing which he dubbed the "monistic" model. According to such a model, the test of a theory *T* only requires that one compares it "with a class of facts (or observation statements) which are assumed to be 'given' somehow" (1963/1999a: 91). The monistic model, Feyerabend argued, is fatally flawed in that it neglects that there are facts "which cannot be unearthed except with the help of alternatives to the theory to be tested, and which become unavailable as soon as such alternatives are excluded" (1963/1999a: 92). In order to severely test any theory *T*, Feyerabend claimed, one should deploy *at least* one alternative to *T*. More specifically, Feyerabend put forward a pluralistic model of theory testing according to which one should operate with "*a whole set of partly overlapping, factually adequate, but mutually inconsistent theories*"

(1963/1999a: 92, italics in the original).[5] The pluralistic model of theory testing is what we refer to here as the "limited pluralism" view.

Since in 1997 the DBM certainly counted as an alternative to current approaches to the treatment of tumors, it may be tempting to think that, based on the limited pluralism view, Feyerabendian pluralists would of course have wanted to give the DBM a fair hearing, perhaps even recommending the authorization of the clinical trials. However, in 1997 the DBM lacked – just as it does today – a feature required to qualify as the kind of alternative with which one is supposed to traffic to operate Feyerabend's pluralistic model of theory testing: the DBM was not factually adequate in any reasonable sense of the notion of "factual adequacy". More specifically, since there was no publicly available evidence concerning the DBM's safety and efficacy, there was no reason to view the DBM as an alternative possessing, as per the pluralistic model, the potential to discover relevant facts – concerning either carcinogenesis or the safest and most effective way to treat tumors – that had remained hidden from view due to the dominance of chemotherapy. As Feyerabend succinctly put the point, "[n]ot all alternatives are equally suited for the purpose of criticism" (1965/1981: 109). In order for a Feyerabendian pluralist to recommend conduct of the trials of the DBM, Di Bella and his supporters would have needed (at least preliminary) evidence in hand, suggesting that the set of theories to be used in a severe test of the safety and efficacy of current tumor treatments should include the DBM. In other words, Feyerabendian pluralists would have scolded Di Bella for only partially applying Feyerabend's principle of proliferation, which recommends that one should "[*i*]*nvent and elaborate theories which are inconsistent with the accepted point of view*" (1965/1981: 105, italics in the original). In fact, while Di Bella certainly complied with the imperative to invent an alternative to the dominant theory, the DBM fared to say the least very poorly in terms of so-called "elaboration" – that is, in terms of the set of tasks required of anyone championing a self-proclaimed radical alternative to current scientific "orthodoxy", including the collection of evidence supporting the alternative. In short, then, in 1997 Feyerabendian pluralists would have voted against the authorization of the trials of the DBM.

4. *The oceanic view vis-a-vis the Di Bella case: do authorize the trials!*

Or maybe not. As is well-known, Feyerabend's understanding of theoretical pluralism became more and more permissive as time went by. For instance, in

[5] On the much discussed pluralistic model put forward by Feyerabend, see among others Preston (1997: Ch. 7), Farrell (2003: Ch. 5), Oberheim (2006), Bschir (2015), Tambolo (2015) and Collodel (2016).

the first edition of *Against Method* he explicitly suggested that one could do away with the condition of factual adequacy of the alternatives to the dominant point of view (1975: 41, note 8). And in any case, as early as 1965 he declared that the principle of proliferation "prevents the elimination of older theories which have been refuted", since such theories "contribute to the content of their victorious rivals" (1965/1981: 107). More specifically, Feyerabend championed the view that knowledge "is not a series of self-consistent theories that converges towards an ideal view; it is not a gradual approach to the truth. It is rather an ever increasing *ocean of mutually incompatible alternatives*" (1993: 21, italics in the original). On such "an extremely cumulativist account of science" (Niiniluoto 1999: 294), no alternative ever drops out of the picture:

> All theories, even those which for the time being have receded into the background, may be said to possess a "utopian" component in the sense that they provide lasting, and steadily improving, measuring sticks of adequacy for the idea which happens to be at the centre of attention (Feyerabend 1965/1981: 107).

Sure, in 1997 the DBM was not one of those old, superseded theories that, on Feyerabend's account, one should nevertheless treat as an integral part of current science: it was, rather, a newcomer. Still, nothing in theoretical pluralism as Feyerabend came to characterize it suggests that there should be barriers to entry in the market of ideas: "experts and laymen, professionals and dilettanti, truth-freaks and liars – they are all invited to participate in the contest and to make their contribution to the enrichment of our culture" (1993: 21). And Feyerabend's support not only of theoretical, but also of methodological pluralism can easily be construed as licensing precisely the harsh criticisms against current methodological conventions voiced by Di Bella. In short, then, it is easy to imagine a Feyerabendian pluralist who, in 1997, either recommends the authorization of the trials, or even suggests that in fact, no trial is needed for any drug or treatment whatsoever, since when it comes to assessing them, the attending physician's clinical eye is all that matters.

That a Feyerabendian pluralist could plausibly have supported the authorization of the trials is, in our view, a sign of the problems faced by Feyerabendian pluralism, as it evolved into a doctrine that did not include some appropriately demanding condition of adequacy for the alternatives welcome to enter the competition, such that knowledge gets characterized as an ever increasing ocean of mutually incompatible alternatives. Abandoning the very idea of factual adequacy is to say the least a very incautious move, especially in light of another relevant aspect of the case analyzed here.

In the course of 1998, after quite some resistance on the part of Di Bella had been overcome, a team of researchers operating on behalf of the Ministry

of Health, led by epidemiologist Eva Buiatti, was granted unrestricted access to Di Bella's archive and conducted a study of the records of patients therein contained – the oldest one dating back to 1971 (Buiatti *et al.* 1999). The study showed that Di Bella's claims concerning the thousands of patients that had successfully been treated with the DBM were utterly unsubstantiated. First of all, the archive included more or less three thousand items, while Di Bella had repeatedly boasted about the much higher figure of ten thousand patients. Secondly, about half of the records had to be excluded from the study, since they either did not contain a cancer diagnosis, or contained no diagnosis at all. Third, the analysis of the records of patients showed that the drugs prescribed by Di Bella to his cancer patients "changed widely" (Buiatti *et al.* 1999: 2145) during the 1971-1997 period, and that the "protocol proposed by Dr. Di Bella" for the trials "does not correspond to his prescriptions in the period 1971-1997" (Buiatti *et al.* 1999: 2148). Fourth, the survival probability observed in the patients treated with the DBM was lower than that observed in the control group, built by appropriately matching each one of the records analyzed with up to four randomly selected cases, drawn from public registries. The comparison between the observed survival among Di Bella's patients and the observed survival among cases used as a control concerned 176 patients. Of these 176 patients, only four had been treated with the DBM as the first or only therapeutic choice, and only one was alive at the end of follow-up (Buiatti *et al.* 1999: 2144-2145).

In short, then, before the 1998 phase II trials, not only was the alleged evidence of the safety and efficacy of the DBM not publicly available: there was no evidence at all – not in Di Bella's archive, nor anywhere else. Authorizing experiments on human subjects in the absence of any reason to presume the possible efficacy of the DBM was to say the least a very questionable decision, from the ethical, scientific, and economic point of view. The culprit, of course, was not Feyerabendian pluralism, but rather, the Italian Parliament. Yet, it is doubtful that Feyerabendian pluralists could have had anything to say against the authorization, unless they appealed to some condition of factual adequacy of the alternative to the dominant theory – that is, unless they stuck to the limited pluralism view and abandoned the oceanic view. Or perhaps, as we shall see in Section 5, they could have said something against authorizing the trials.

5. *Respectable thinkers* vs. *cranks*

Feyerabendian pluralists could certainly complain that our discussion above relies on the benefit of hindsight. In fact, the study of the records of patients contained in Di Bella's archive was conducted *after* the Parliament had authorized the clinical trials of the DBM, and its results were published when the

trials were well over. And in any case, Feyerabendian pluralists could retort, our discussion is uncharitable.

In fact, as many of Di Bella's critics immediately pointed out in 1997, it was easy to ascertain that despite Di Bella's grandiose claims concerning his status as a possible Nobel Prize winner, he could hardly claim expertise in the relevant scientific field: in the overwhelming majority of cases, his publications consisted of one-page abstracts of the contributed talks that he had given over the years at various conferences and workshops. Moreover, the DBM was created and perfected in the private laboratory of physiology founded and funded by Di Bella, who for decades worked in substantial isolation from the relevant scientific community: as Di Bella openly acknowledged, the only attempt to publish the results of his work on cancer treatment in a respectable peer-reviewed venue was met with a rejection letter (Di Bella *et al.* 1998: 114-115). Furthermore, Di Bella's reluctance to hand in the records of patients which, he alleged, would support his claims concerning the safety and efficacy of the DBM raised many an eyebrow, and not only among the most vocal of his critics. And finally, Di Bella's criticism of "orthodox" or "official" medicine went well beyond what one would expect to see in a properly scientific discussion of the respective merits of chemotherapy and the DBM. To mention but one instance, Di Bella's son Adolfo summarized his father's overall attitude towards the pharmaceutical industry as follows: the "'Invisibles' that shape the world's destiny" (Di Bella 2012: 307) simply cannot afford the emergence of a safe and effective alternative to chemotherapy. And to confirm that this is a pretty accurate summary of Luigi Di Bella's views, one only needs to read what he wrote in a book aimed at the lay public which came out in 1997, just a few months prior to his rise to national fame: "In this muddy and rotten environment [that of approved cancer treatments], there is the victim who suffers and dies, and there is the vampire who gets fat and prospers" (Di Bella 1997: 65, underlined in the original).

Feyerabendian pluralists can then rebut the conclusion of our discussion in Section 4 by saying that all that they would have needed in 1997-1998 to properly deal with the Di Bella case was the distinction, drawn by Feyerabend himself, "between 'respectable' people and cranks" (1964/1981: 199). In Feyerabend's words, such a distinction

> lies in the research that is done once a certain point of view is adopted. The crank usually is content with defending the point of view in its original, underdeveloped, metaphysical form, and he is not at all prepared to test its usefulness in all those cases which seem to favor the opponent, or even to admit that there exists a problem. It is this further investigation, the details of it, the knowledge of the difficulties, of the

general state of knowledge, the recognition of objections, which distinguishes the "respectable thinker" from the crank (1964/1981: 199).

Based on the information available to the public *before* the Parliament authorized the trials, Di Bella seemed to check all the boxes for a crank.[6] And based on the respectable thinker vs. crank distinction, for a Feyerabendian pluralist it would have been obvious that the right thing to do was to side against the authorization of the trials. However, there is nothing in the distinction – with which we cannot find fault – that makes it a distinctively Feyerabendian one. In other words, Feyerabendian pluralists can very plausibly claim that when it comes to spotting crankiness, they are no less well positioned than anyone else. However, recognizing a crank when they see one is hardly an ability that Feyerabendian pluralists are endowed with *qua* Feyerabendian pluralists. And there is more.

In the passage quoted above, Feyerabend draws the attention to "the research that is done once a certain point of view is adopted" as a way to tell a respectable thinker from a crank. The respectable thinker, Feyerabend suggests, is well aware of the state of background knowledge, and willing to engage in the laborious tasks required to defend and elaborate their point of view in the face of difficulties. Now of course, doing the high-quality work expected of a respectable thinker does not necessarily lead to success. For instance, serious scientific research does not necessarily lead to alternatives to the dominant point of view enjoying a high degree of success – of factual adequacy, to use the term employed by Feyerabend when describing the pluralistic model of theory testing. Still, theories exhibiting an appropriate degree of factual adequacy are precisely what one expects the work of the respectable scientist to yield, when said work is successful. A respectable scientist is supposed to champion alternatives arguably showing at least some intersubjectively appreciable merit, possibly with the potential to become, although perhaps not immediately, real contenders.

Feyerabend's emphasis on the respectable thinker vs. crank distinction at the very minimum points in the direction of the idea of alternatives possessing an appropriate degree of factual adequacy – that is, of the limited pluralism view. The view of knowledge as an ever increasing ocean of mutually incompatible alternatives espoused by Feyerabend pulls in the opposite direction. And in spite of how eloquently the oceanic view of knowledge is formulated, it is pretty impossible to square it with the fact that (not only) in the Di Bella case, the situation can be briefly described as follows: one alternative – in this

[6] Unlike other commentators of the episode, we do not view Di Bella as a fraudster, since to the best of our knowledge, he was in good-faith convinced of the actual truth of his claims concerning the efficacy of the DBM.

specific instance, the dominant approach – has been shown to be effective (unfortunately, only to a degree); the other alternative – the newly-introduced DBM – was never a candidate worth of serious scientific consideration. Therefore, we suggest, a Feyerabendian pluralist could have dealt with the Di Bella case in the correct way by adopting a properly limited or restricted form of pluralism, which requires one to drop the oceanic view of knowledge whereby no alternative ever drops out of the picture. At least since the mid-1960s, Feyerabend consistently championed the oceanic view, glorified in all editions of *Against Method* (e.g., 1975; 1993), as wedded to his pluralistic model of theory testing. Feyerabendian pluralists, we suggest, should embrace the latter but not the former.

6. *Concluding remarks*

When the Italian Parliament authorized the clinical trials of the DBM, there was no shortage of willing experimental subjects. Quite on the contrary, many who would have wanted to enroll in the trials were unable to secure a spot: when Di Bella was at the peak of his fame, many believed – or at least hoped – in the DBM's efficacy. As mentioned, an important role in the process that led to the authorization was played by the fact that an unknown but sizable number of patients elected to abandon approved treatments in favor of the DBM. Still, we maintain, the decision made by the Italian authorities was blameworthy on the ethical, scientific, and economic level. Our discussion shows that a Feyerabendian pluralist would plausibly have found themselves in agreement with such a decision, unless they dropped the oceanic view of knowledge and stuck to a limited version of pluralism revolving around the pluralist model of theory testing.

The gist of the present analysis, it seems to us, is in line with some important threads emerged in recent Feyerabend scholarship. In fact, it is well-known that at least in some of his later writings, Feyerabend openly acknowledged the resistance that the world offers to some of our attempts to describe it. As he put it, some approaches to the world "find no point of attack in it and simply collapse" (1999b: 145). Unfortunately, Feyerabend was never too explicit on how one should proceed to strike the right balance between the acknowledgment of said resistance and his pluralist leanings (see, e.g., Tambolo 2014; Brown 2016; Giere 2016). However, Feyerabendian pluralists can do better than Feyerabend himself did in this regard. This is attested, to mention but one instance, by recent approaches to the issue of science-based policy advice concerning such urgent matters as the COVID-19 pandemics that explicitly qualify themselves as "inspired" (Bschir *et al.* 2022) by Feyerabend's plural-

ism – that is, we maintain, by the limited, restricted pluralism that would have allowed a Feyerabendian pluralist to properly deal with the Di Bella case.

Luca Tambolo
Independent scholar
ltambolo@gmail.com

Gustavo Cevolani
IMT School for Advanced Studies Lucca
gustavo.cevolani@imtlucca.it

Acknowledgments: We are grateful to the participants and the audience of the worskhop "The Role of Experts in Democratic Societies. In Honor of Paul K. Feyerabend" (IMT School for Advanced Studies Lucca, June 16, 2023) for questions and suggestions and to Roberto Festa for his comments on a draft of the paper. Gustavo Cevolani acknowledges financial support from the Italian Ministry of University and Research (MUR) through the PRIN 2022 grant n. 2022ARRY9N (Reasoning with hypotheses: Integrating logical, probabilistic, and experimental perspectives), funded by the European Union (Next Generation EU).

References

Brown, Matthew J., 2016, "The Abundant World: Feyerabend's Metaphysics of Science", in *Studies in History and Philosophy of Science*, 57: 142-154.

—, 2021, "Against Expertise. A Lesson from Feyerabend's *Science in a Free Society*?", in Bschir, Karim, Jamie Shaw, eds., *Interpreting Feyerabend. Critical Essays*, Cambridge University Press, Cambridge: 191-212.

Bschir, Karim, 2015, "Feyerabend and Popper on Theory Proliferation and Anomaly Import: On the Compatibility of Theoretical Pluralism and Critical Rationalism", in *HOPOS*, 5: 24-55.

—, Simon Lohse, 2022, "Pandemics, Policy, and Pluralism: A Feyerabend-Inspired Perspective on COVID-19", in *Synthese*, 200: 441.

Buiatti, Eva *et al.*, 1999, "Results from a Historical Survey of the Survival of Cancer Patients Given the Di Bella Mulitherapy", in *Cancer*, 86: 2143-2149.

Collodel, Matteo, 2016, "Was Feyerabend a Popperian? Methodological Issues in the History of the Philosophy of Science", in *Studies in History and Philosophy of Science*, 57: 27-56.

Di Bella, Adolfo, 2012, *Il poeta della scienza. Vita del professore Luigi Di Bella*, Emmeci Edizioni, Rome.

Di Bella, Giuseppe, Adolfo Di Bella, Luciano Gualano, 2012, "Laudatio for the Centenary of the Birth of Luigi Di Bella, MD, PhD", in *Neuroendocrinology Letters*, 33: 247-248.

Di Bella, Giuseppe, 2010, "The Di Bella Method (DBM)", in *Neuroendocrinology Letters*, 31: 7-42.

Di Bella, Luigi, 1997, *Cancro: siamo sulla strada giusta?*, Travel Factory, Rome.

—, Bruno Vespa, 1998, *Si può guarire? La mia vita. Il mio metodo. La mia verità*, Mondadori, Milan.

Ernst, Edzard, 2021, *So-Called Alternative Medicine (SCAM) for Cancer*, Springer, Cham.

Farrell, Robert, 2003, *Feyerabend and Scientific Values. Tightrope-Walking Rationality*, Kluwer, Dordrecht.

Feyerabend, Paul Karl, 1963/1999a, "How to Be a Good Empiricist. A Plea for Tolerance in Matters Epistemological", as reprinted in Feyerabend 1999a, pp. 78-103.

—, 1964/1981, "Realism and Instrumentalism: Comments on the Logic of Factual Support", as reprinted in Feyerabend 1981: 176-202.

—, 1965/1981, "Reply to Criticism. Comments on Smart, Sellars and Putnam", as reprinted in Feyerabend 1981, pp. 104-131.

—, 1975, *Against Method. Outline of an Anarchistic Theory of Knowledge*, New Left Books, London.

—, 1978, *Science in a Free Society*, New Left Books, London.

—, 1981, *Realism, Rationalism and Scientific Method. Philosophical Papers, Volume 1*, Cambridge University Press, Cambridge.

—, 1987, *Farewell to Reason*, Verso, London.

—, 1993, *Against Method*, 3rd ed., Verso, London.

—, 1999a, *Knowledge, Science and Relativism. Philosophical Papers, Volume 3*, edited by John Preston, Cambridge University Press, Cambridge.

—, 1999b, *Conquest of Abundance. A Tale of Abstraction Versus the Richness of Being*, edited by Bert Terpstra, The University of Chicago Press: Chicago.

Giere, Ronald, 2016, "Feyerabend's Perspectivism", in *Studies in History and Philosophy of Science*, 57: 137-141.

Italian Study Group for the Di Bella Multitherapy Trials, 1999, "Evaluation of an Unconventional Cancer Treatment (the Di Bella Multitherapy): Results of Phase II Trials in Italy", in *British Medical Journal*, 318: 224-228.

Kidd, Ian James, 2016a, "Why Did Feyerabend Defend Astrology? Integrity, Virtue, and the Authority of Science", in *Social Epistemology*, 30: 464-482.

—, 2016b, "How Should Feyerabend Have Defended Astrology?", in *Social Epistemology Reply and Review Collective*, 5: 11-17.

Lloyd, Elizabeth, 1997/2000, "Feyerabend, Mill, and Pluralism", as reprinted in Preston, John, Gonzalo Munévar, David Lamb, eds., 2000, *The Worst Enemy of Science?*, Oxford University Press, Oxford: 115-124.

Markle, Gerald E., James C. Petersen, eds., 1980, *Politics, Science, and Cancer: The Laetrile Controversy*, Westview Press, Boulder.

Minutes of the January 14, 1998, Parliamentary Hearing, Committee for Social Affairs of the Italian Chamber of Deputies, accessed February, 2024, http://leg13.camera.it/chiosco.asp?cp=2&content=/_dati/leg13/lavori/stencomm/tabindag.htm.

Minutes of the January 15, 1998, Parliamentary Hearing, Committee for Social Affairs of the Italian Chamber of Deputies, accessed February, 2024, http://leg13.camera.it/chiosco.asp?cp=2&content=/_dati/leg13/lavori/stencomm/tabindag.htm.

Minutes of the January 20, 1998, Parliamentary Hearing, Committee for Social Affairs of the Italian Chamber of Deputies, accessed February, 2024, http://leg13.camera.it/chiosco.asp?cp=2&content=/_dati/leg13/lavori/stencomm/tabindag.htm.

Niiniluoto, Ilkka, 1999, *Critical Scientific Realism*, Oxford University Press, Oxford.

Oberheim, Eric, 2006, *Feyerabend's Philosophy*, de Gruyter, Berlin.

Pigliucci, Massimo, 2016a, "Was Feyerabend Right in Defending Astrology? A Commentary on Kidd", in *Social Epistemology Reply and Review Collective*, 5: 1-6.

—, 2016b, "How Should Feyerabend Have Defended Astrology? A Further Reply to Kidd", in *Social Epistemology Reply and Review Collective*, 5: 10-16.

—, 2016c, "Feyerabend and the Cranks: A Reply to Shaw", in *Social Epistemology Review and Reply Collective*, 6: 1-6.

Preston, John, 1997, *Feyerabend: Philosophy, Science and Society*, Polity Press, Cambridge.

Shaw, Jamie, 2017, "Feyerabend and the Cranks: On Demarcation, Epistemic Virtues, and Astrology", in *Social Epistemology Review and Reply Collective*, 6: 74-88.

—, 2021, "Feyerabend and Manufactured Disagreement: Reflections on Expertise, Consensus, and Science Policy", in *Synthese*, 198: 6053-6084.

Tambolo, Luca, 2014, "Pliability and Resistance: Feyerabendian Insights into Sophisticated Realism", in *European Journal for Philosophy of Science*, 4: 197-213.

—, 2015, "A Tale of Three Theories. Feyerabend and Popper on Progress and the Aim of Science", in *Studies in History and Philosophy of Science*, 51: 33-41.