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The criticism of medicine at the end of its "golden age"

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Abstract

Medicine is increasingly subject to various forms of criticism. This paper focuses on dominant forms of criticism and offers a better account of their normative character. It is argued that together, these forms of criticism are comprehensive, raising questions about both medical science and medical practice. Furthermore, it is shown that these forms of criticism mainly rely on standards of evaluation that are assumed to be internal to medicine and converge on a broader question about the aim of medicine. Further work making medicine's internal norms explicit and determining the aim of medicine would not only help to clarify to what extent the criticism is justified, but also assist an informed deliberation about the future of medicine. To illustrate some of the general difficulties associated with such a task, the paper concludes by critically engaging Edmund Pellegrino's account of the aim of medicine as well as the Hastings Center's consensus report.

Keywords Medicine · Criticism · Overmedicalization · Objectification

During the nineteenth century, advances in physics, chemistry, and biology converged to form the basis for scientific medicine. Since then, scientific medicine has achieved a historically unparalleled global dominance, grown into a global industry, and changed the previously pluralistic landscape of healing practices throughout the world. The expansion reached its zenith during the second half of the twentieth century, which historians and medical professionals often portray as the "golden age of medicine" [1–4].[1] This period is often described as one characterized

[1] The exact temporal boundaries of the "golden age" are not drawn consistently in the literature. Some maintain that the golden age comprises the first half of the twentieth century; others hold that it characterizes a period after World War II (see [3]); and still others associate it with the "conquest" of epidemic infectious disease [5].

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by scientific and therapeutic advances, contributions to longevity, high levels of prestige, and confidence in medical institutions and medical science.

Whether such confidence is based on measurable therapeutic successes and contributions to longevity is, however, contested, and some maintain that "revolutionary narratives" about advances sometimes interfere with more nuanced analyses [6]. As early as the nineteenth century, pathologist Rudolf Virchow claimed that "the improvement of medicine would eventually prolong human life, but improvement of social conditions could achieve this result now more rapidly and more successfully" (quoted in [7, p. 127]). A century later, Thomas McKeown argued that the reduction of mortality observed during the twentieth century is largely attributable not to medicine, but to better nutrition, housing, and public health measures [8].[2] Writing in a time characterized by radical criticisms of social institutions, McKeown's work became part of a critical movement that advocated the reevaluation of medicine's efficiency and societal role.

On the more extreme side of this movement, some argued not only that sanitation, nutrition, and housing were more important determinants of health than medicine, but also that medicine has become an institution of social control and a threat to health [9, 10]. Ivan Illich's 1974 paper "Medical Nemesis" in the *Lancet* [10]—followed by his bestselling attack on modern medicine with the same title [11]—distinguishes three types of iatrogenesis: clinical (i.e., direct harm by treatment), social (i.e., medicalization of life problems), and cultural (i.e., loss of traditional ways of dealing with suffering). His indictment of medicine as "institutional hubris" and his calls for the "deprofessionalisation of medicine" were dismissed by many medical professionals. His criticism was polemical, radical (e.g., maintaining that medicine probably did more harm than good), selective (e.g., downplaying medicine's successes in relief and rehabilitation), and driven by a more general critique of modernity; and, importantly for my purposes, it came from outside of medicine.

Today, almost five decades after the publication of "Medical Nemesis," medicine is increasingly subject to various forms of criticism that raise familiar themes from Illich's work. The criticism is more comprehensive, has more nuance, and comes from inside medicine—that is, from leading medical professionals—which makes it harder to ignore. For example, in a 2019 publication in the *Lancet* [1] and a 2020 book with the evocative title *Can Medicine Be Cured?* [2], prominent gastroenterologist Seamus O'Mahony notes that since entering medicine, he has witnessed decline and corruption in medical research and medical practice. First, he maintains that "medical research … has itself become a patient," increasingly scrutinized by meta-researchers. Second, he argues that "medicine has extended its dominion over nearly every aspect of human life," herding "entire populations—through screening, awareness raising, disease mongering, and preventive prescribing—into patienthood [1, pp. 1798–1799, 2, pp. 25–26]. Third, he laments having witnessed "the public's disenchantment with medicine," which he links to

[2] Some of McKeown's most forceful claims were based on studying mortality decline in England and Wales. Since then, researchers have pointed to similar examples during the mid-twentieth century (China 1949–1979, Cuba 1959–1979) where medicine has played only a minor role in mortality decline compared to improvements in housing, sanitation, and education [6].

the quality of care received in various health care settings. Patients have become, as O'Mahony puts it, "a problem to be processed by the hospital's conveyor belt; it is hardly surprising that they often feel that nobody seems to be in charge, or cares about them as individuals" [2, p. 330].

Of course, the criticism has not arisen in a vacuum, and it should be seen as connected to a long range of legal, social, and ethical assessments of medicine and biomedical research (see [12]). Still, the issue is worthy of further investigation, especially since this criticism and other challenges facing medicine (e.g., aging populations, explosion of costs) seem to indicate that medicine's scope and role in society is fated to be altered in the twenty-first century. At this critical threshold, providing a firm understanding of dominant forms of criticism and explicating the problems that they convey can assist an informed deliberation about the future of medicine.

To that end, the current paper will proceed in three steps. First, it distinguishes three sorts of criticism that O'Mahony's work touches on, but which can be found expressed in much more detail elsewhere in the literature. The criticisms raise questions about medical research (skepticism), the use of medical means to address nonmedical problems (overmedicalization), and the quality of care experienced by patients (objectification). Second, upon distinguishing forms of criticism and the nature of the norms they appeal to, it is argued that the criticism of medicine is predominantly internal, appealing to constitutive norms of medicine. It is shown that with further explication, more or less implicit norms in medicine can be made explicit, enabling them to be subjected to rational scrutiny. Third, I suggest that the criticisms converge on a more fundamental question about the aim of medicine, but they do not offer insight into what this aim might be. In the final section, I explore and critically engage two influential accounts of the aim of medicine, as canvassed by Edmund Pellegrino's and the Hastings Center. The goal is to illustrate the difficulties with providing an account that helps deal with challenges raised by the criticisms.

The skeptic's criticism of medical science

When O'Mahony maintains that medical research "has become the patient," he touches on a growing skepticism about whether the status and confidence that medicine has enjoyed in contemporary Western societies are justified. In the contemporary landscape, two types of skepticism may be distinguished (see [13]).

Historical skepticism argues that mainstream medicine only merits its prominent status since the emergence of modern clinical trials and evidence-based medicine (EBM) and since it has acquired a genuine capacity to extend life during the mid-twentieth century.[3] Prior to EBM, medicine only achieved a few reasonably effective interventions (e.g., quinine for malaria, orange and lemon juice for scurvy, opium

[3] Indeed, EBM—stressing that clinical decisions ought to be made on the basis of the best available evidence of effectiveness—is in part motivated by recognizing that the history of medicine is dominated by harmful or ineffective interventions.

for pain relief, amyl nitrate to dilate arteries) [3, 14, 15]. Improvement had been achieved by discontinuing certain procedures (e.g., bloodletting), introducing new procedures (e.g., hand washing), while other improvements (e.g., the retreat of diseases like diphtheria, typhoid, and tuberculosis) were attributable to better diet, housing, and working conditions. Worse, some argue that prior to the twentieth century, medicine might have done more harm than good, because it long held on to harmful methods based on humoral theory (e.g., purging, vomiting, phlebotomy, venesection) and often remained committed to this tradition in spite of contradicting evidence. The emergence of larger hospitals in the eighteenth century, often seen as signs of great progress, in many cases actually made medicine more dangerous [15].

Contemporary skepticism is promoted by some prominent and respected physicians and epidemiologists. In the extremely influential article, "Why Most Published Research Findings are False," published in *PLOS Medicine*, John Ioannidis explores the reliability of published medical research findings concluding that the majority of published research claims are false [16, 17]. Prompted in part by escalating health care costs and the growing preparedness to render medicine more evidence-based, a growing amount of meta-research casts doubt on the efficacy of some widely-used treatments, identifying factors that can influence the choice of topic, study design, and methodology in ways that potentially undermines the validity of published research findings. Building on this line of research, Jacob Stegenga argues that except for a few "magic bullets," confidence in the effectiveness of current medical interventions ought to be low [18, p. 11]. Stegenga formulates the argument by using Bayes's Theorem, which is a formula for calculating the probability of a hypothesis or theory, *H*, given the evidence, *E*, that appears to support *H*.[4] The idea is that the posterior probability of a medical intervention being effective given evidence that appears to support its effectiveness is low if three conditions are met.

(1) the prior probability of any particular intervention being effective is low;
(2) the evidence observed is unlikely given the hypothesis that the intervention is effective;
(3) the prior probability of observing evidence, irrespective of whether the intervention is actually effective, is high.

The main arguments in support of (1) to (3) may be summarized as follows. In support of (1), one can offer an inductive argument from the fact that most medical interventions are unsuccessful. Drug companies test many more treatments than ever come to market, and among those that do come to market, a large number end up being withdrawn, restricted, or reassessed as ineffective [18, chs. 3, 9]. Moreover, one can stress that most diseases have complex pathophysiologic bases which render the likelihood of "magic bullet" interventions unlikely. In support of (2), one can

[4] The equation states that the probability of H given the evidence is equal to the prior probability of *H*, multiplied by the probability of *E* given the hypothesis, divided by the prior probability of *E*. The probability of *H* given *E*, $P(H|E)$, depends on: (i) the prior probability of H being true, irrespective of the evidence (i.e., $P(H)$); (ii) the probability of the evidence given the hypothesis (i.e., $P(E|H)$); and (iii) the prior probability of *E*, irrespective of the hypothesis (i.e., $P(E)$).

emphasize that in many cases interventions are little better than a placebo, that effect sizes in trials tend to be low, and that studies frequently reach discordant results [18, pp. 171–175]. In support of (3), one may argue that we may expect to encounter evidence suggesting that an intervention is effective even if it is not, in part because the institutional structure producing medical evidence is biased in favor of positive evidence. Evidential standards (e.g., meta-analyses and systematic reviews, hierarchy of evidence, randomized controlled trials) do not completely eliminate problems with malleability, and the structure of medical science might incentivize exploiting this malleability. Pharmaceutical companies and scientists have a vested interest in reporting positive effects, while there is a bias against reporting negative findings, and no incentive to replicate findings.

Overmedicalization

During the 1970s, the term "medicalization" was coined to describe processes by which conditions previously considered nonmedical become redefined as medical problems (typically as illness, disorder, or disease). For example, saying that pregnancy has been medicalized means that pregnancy is now seen as a potential disruption to health that requires expert medical care and risk management. As such, medicalization is a value-neutral, descriptive term designating cases in which medical means are *properly* used for conditions hitherto considered as outside the medical realm. For instance, medicalization occurred when a set of problems known as "shell shock" was redescribed as the symptom of the medical condition post-traumatic stress disorder (PTSD), or when alcoholism was transformed from a moral to a primarily medical problem [19].

In contrast, *overmedicalization* describes cases in which a *category error* occurs that turns life problems and normal human variations into pathological conditions, constituting or leading to the improper use of medical means to address political, social, and personal problems, often replacing established practices that traditionally addressed them [19]. For example, while individuals living in social isolation due to being severely shy and socially awkward were traditionally not considered as suffering from a medical condition, they are today increasingly diagnosed with mental disorders like social phobia or social anxiety disorder, which imply some difference in kind from "normal shyness" [20]. Critics argue that such cases amount to overmedicalization with potentially severe consequences.

First, by expanding the category of what demands medical action, overmedicalization contributes to the explosion of the costs of medical treatment [21]. Second, the worry is that overmedicalization does not reflect objective clinical knowledge, but predominantly social judgments about what is considered to be appropriate behavior [20, 22]. It may reflect disapprobation of forms of behavior that do not conform to dominant values in contemporary culture, such as being self-confident, talkative, assertive, and comfortable with self-presentation.

Third, overmedicalization changes the focus of problem-solving to individual-level medical interventions and away from the political and social structures that generate conditions under which certain bodies, conditions, or traits (e.g., being

severely shy) become debilitating problems. This obstructs public deliberation that might lead to recognizing a larger natural variation and rethinking whether the relevant dominant values in contemporary culture—such as the value of capacity to perform with ease in the social realm—should be resisted.

Fourth, overmedicalization (the explosion of conditions and risk factors that are now classified as pathological) appears to be causally implicated in an increase in the number of healthy people who are seriously concerned about their health. In a development which seems puzzling in light of gains in lifespan and health, people increasingly see their lives as acutely threatened by hazards that the medical sciences are first discovering now (e.g., low radiation, genetically modified crops, cell phones, etc.) or by trivial or downright fictional hazards that ought to be dismissed as deception [23].

Objectification

Critics also claim that mainstream medicine is not truly driven by patient needs. Patients seek not only scientifically based management of their conditions, but also what is often described as "humane" care for aspects of those ailments that are best described as existential, psychological, or affective [14, p. 51]. Patients complain that such needs are not met and that the care they receive is "objectifying" or "dehumanizing" and brackets their experience of the illness from the clinical consultation. Without being able to do justice to the full complexity of the phenomenon, some clarification can be achieved by focusing on *technological mediation* and *deindividualization* in health care environments.

First, the advances in therapeutic and diagnostic devices have contributed to the emergence of technologically mediated management that suppresses dimensions of care that would address the psychological and social dimensions of ailments [24]. The emphasis on this type of management and its increased dependence on sophisticated technology stimulates the tendency to bracket the patient's illness experience from the clinical consultation. It predisposes physicians toward seeing the body of the patient as a system made up of interacting and separately operating parts, such that the patient's individuality, subjective experience, and personal narrative is perceived as a veil that might obscure the physician's direct access to the disease. The patient as a person is at risk of disappearing in the encounter, eroding the conditions for an intimate relationship with medical professionals that many patients associate with earlier stages of medical practice [25, 26].

Second, health care environments tend to deindividualize both patients and physicians, which probably contributes to the experience of objectification. In a mutually reinforcing process, the deindividualized appearance of the patients (e.g., wearing uniform coats and gowns) might make them appear less as individual agents that require empathy, while the deindividualized appearance of the physicians (e.g., wearing uniform white coats) might mask their individual responsibility toward patients. The nature of these environments might also contribute to practices that increase objectification. For example, patients are sometimes labeled in terms of their illnesses ("a diabetic" instead of "a person with diabetes") or referred to by

acronyms or the body part being operatively intervened on, both of which collapse the distance between the person and the disease. Such practices increase the likelihood of medical professionals' forgetting that they are engaged with people who are in vulnerable states, who grant them access to highly private aspects of their life, and whose trust they need in order to be able to care for them [27, 28]. Highly specialized health care that focuses entirely on the disease often translates illness experiences into several different diagnoses in a way that does not render their predicament transparent and meaningful to the patient. As a patient in a study by Mia Berglund et al. puts it, "you do not feel human, but … as an object on a conveyor belt, no one really cares. They have decided, medical science has determined, that's the way it is" [29]. Such reproaches do not target human error in the work of physicians or nurses, but rather systemic problems and institutional culture.

Of course, critics may voice these concerns without denying the numerous benefits associated with using technologically sophisticated devices or the benefits of focusing more narrowly on less than the whole human being in diagnosis and intervention.

The character of the criticism

Taken together, the three forms of criticism are *comprehensive*: medicine is less efficient than generally thought (skepticism), medical means are used to address nonmedical problems (overmedicalization), and quality of care fails to meet certain needs (objectification). The criticism thus targets medicine both as a medical science and a medical practice, and it constitutes a powerful assembly of forces that will contribute to transforming medicine in the twenty-first century. At the same time, the criticism is *nuanced* in the sense that it simultaneously recognizes that medicine is facing different challenges than just a century ago. Critics are well aware that increased longevity due to "golden age" advances brings to the fore a range of chronic diseases that are much more difficult to treat. Also, they are aware that medical professionals increasingly encounter individuals with composite medical and social needs (e.g., related to homelessness and substance abuse), and it would be unrealistic to expect that professionals with medically defined roles be able to meet these needs.

The following sections will explicate the criticisms and the challenges that they convey. One important step toward completing this task is to unearth the specific *normative character* that the different forms of criticism share. Focusing on the nature of the standards of evaluation that they deploy can assist a better understanding of the criticism but also provide clues as to how to deal with the challenges they point to.

Before we start, a note on the choice of terms is in order. In general, criticism aims to raise awareness of a problem and contribute to changing the state of the target, which can be some state of affairs in the world, or the stance that one takes toward it (e.g., historical skepticism). Importantly, while change can be effectuated in a number of ways (e.g., using monetary incentives, threats, manipulation),

criticism aims to change things by offering reasons. For this, besides appealing to certain observed facts, it has to appeal to some *norm* that purports to provide a reason and thereby *justify* change [30]. Norms specify standards that can be met or failed to be met; they prohibit and permit courses of action, but also implicitly structure the space of possibilities of action [31, ch. 3]. Norms are linked to values, on the one hand (e.g., courage is a general value, norms define what is courageous behavior in a situation), and to reasons on the other. A justification can be suitably demanded for why norms should be met, but in many cases, they are profoundly implicit such that it would not make sense to demand one.[5]

Ways to criticize social practices

The target of the criticism can be individuals, actions, and/or states of affairs, but the type of criticism I am interested in in this context is one that targets a *social practice.* Roughly, a social practice is a collective activity that involves an arrangement of norms, and it functions, as Sally Haslanger puts it, "in the primary instance, to coordinate our behavior around resources" [32, p. 237]. Practices are defined as "offices and positions with their rights and duties" [33, p. 55], including procedures for determining admissible and inadmissible violations.[6] Practices can be conceived in terms of norm-conforming behavior, but it is essential that the norms and rules inherit their purpose and point from the *aim* of the practice and the good it is directed at [34]. These constitutive aims (e.g., the law aims at justice, education at developing children's abilities) provide criteria for evaluating the behavior of participants. The practice may require institutions to serve its aim by norm enforcement, organization, and funding,[7] and these norms may be changed in a way that advances the aim of the practice, without transforming it into something different.

Social practices are the building blocks of larger social structures. For example, a university education involves not only practices of research and lecturing, but also commencement ceremonies, sporting events, accreditation, etc. Many of its practices

[5] Some distinguish between criticism and critique, taking the former to refer to something less elaborated and directed toward persons and the latter to refer to a more developed consideration of a subject. However, this distinction is ambiguous and not used systematically in the literature. For example, in his discussion of criticism in science and philosophy, Karl Popper consistently speaks of "criticism," even though the way he uses the terms fits the definition of critique [35]. For this reason, I will use "criticism" in a broad sense, which includes instances of critique.

[6] It is not clear, however, that practices can be said to be governed by rules. Drawing on Wittgenstein's work on rule-following, some have argued that rules as more or less adequate representations of aspects of practices that are primary to the rules. Rules cannot keep participants in practices "on the rails" of the practice. Being able to comprehend what it is to follow a rule might require a prior conception of practice.

[7] An institution is not itself structured by the aim and norms of the practice it organizes, but in terms of practice-external goods (e.g., status, money, power) [34, p. 194]. Because institutions have a tendency to separate from the practice they sustain, the pursuit of two kinds of goods constitutes a source of potential conflict. For Alasdair MacIntyre, without virtues (e.g., justice, truthfulness) practices would not be able to withstand the corrupting power that institutions exert. This is problematic not only because the aims of practices are not achieved. There is much more at stake, because practices are the vehicles through which the common good and the potential of human beings is actualized.

are defined by a set of rules that are prior to the behavior of the participants: a doctoral student may receive a hood from a professor, but it only counts as "hooding" within the set of rules that constitutes a hooding ceremony. At the same time, the practice offers participants roles to occupy, norms to follow, and reasons to act: the professor has a reason to wear academic regalia, because it is required when participating in the ceremony. Complex, rule-governed practices depend on coordinated intentions and behavior (e.g., ceremony), involve accountability, and explicitly include judgments of correctness and incorrectness, while simple practices consist of patterns in behavior that result from social learning and cultural schemas internalized through socialization (e.g., exchange of gestures). These can be prelinguistic bases for rule-following, with implicit, vague, and evolving norms such that behavior in accordance with them only requires basic responsiveness, not full-blown reflective judgments.

A criticism of a social practice can take two forms, depending on the norms it appeals to. In the case of *external criticism*, the standards employed stem from outside the practice criticized and which the participants of the practice may not accept. As Popper puts it in the context of criticizing a theory, external criticism "attacks a theory from without, proceeding from assumptions or presuppositions which are foreign to the theory criticized" [35, p. 29]. For example, when critics appeal to human rights or the Bible, as some do in their criticism of medical practices, they are engaged in a form of external criticism. Here, it is irrelevant whether or not the criticized practice shares these standards, and if participants in the relevant practice do not accept those external norms, or do not think they apply, then they will probably not be impressed by the criticism.

By contrast, *internal criticism* proceeds from the inside, employing standards that are seen as internal to the practice criticized, even if these are not explicitly recognized by all participants. The reference point is norms of the practice, not sets of beliefs shared by the participants of the social practice. Because it appeals to norms that the practice is seen as committed to, internal criticism is often seen as an effective form of criticism: judging that a practice is against its own standards does not face the difficulty of having to demonstrate the legitimacy of applying an external standard that may reflect the values of a particular group. As the norms appealed to are internal to the practice, raising awareness of a violation of its own standards will likely be accompanied by some degree of motivation to change. Popper worries that immanent criticism "is relatively unimportant" since it must limit itself to pointing out inconsistencies within a practice [35, pp. 29–30]. However, because theories as well as practices are attempts at solving a problem, they can be submitted to internal criticism, for example, for being unable to solve certain problems or for not succeeding better than competing theories. In this way, immanent criticism may point out serious weaknesses even if the practice is internally consistent. As such, internal criticism is not necessarily conservative, aiming to restore or create internal consistency between norms and aims. In some cases, the fact that some norms of the practice are not satisfied stems from the fact that they are contradictory in themselves: they cannot or are unlikely to be fulfilled

for structural reasons [31].[8] Such a contradiction can arise if a practice constitutively embodies mutually opposing aims and norms that cannot be realized without contradiction or turn against the original intentions of the practice if realized.

Internal criticism may target a norm that is applicable to a practice or one that is constitutive of it. There are, of course, a large number of norms internal to practices, but some of them are somehow "privileged," picked out as the ones that ought to be conformed to [36, p. 28]. Some of these norms governing practice are *constitutive norms*, in the sense that (a) the practice in question would not be the same without them, and (b) they specify actions and roles that could not exist outside of the activity the practice comprises (nurse, doctor, etc.). The internal norms of practices need not be explicit but are often a mixture of more or less conscious and explicit elements (see [36, ch. 1]).

The internal criticism of medicine

I will now consider the strands of the criticism of medicine described in this paper in light of this brief sketch of different forms of criticism. First, what unites these forms of criticism is their *internal* character. They all implicitly assume that the norms that medicine fails to live up is not external to medicine. Instead of condemning medicine by deploying independently justified standards (e.g., faulting medicine for rising expenditures or for failing to contribute to social justice) they maintain that *medicine has diverted from its course*; it is no longer on the path toward its aim, and thus fails to represent the values and norms it comprehends as its own.

Second, medicine is criticized as *a social practice* that comprises both medical science and clinical practice. As a social practice, medicine coordinates a community in producing and using knowledge, assigning roles for participants (patients, nurses, physicians, etc.) in a variety of settings (e.g., the lab, the hospital, the clinic), all of which is governed by norms and social meanings internalized through participation. The different strands of criticism appeal to two types of internal norms, both from the perspective of medical professionals and the lay experiences of the patients. The skeptical criticism mainly refers to the violation of *epistemic norms* of systematic knowledge-seeking (such as failing to communicate negative results) that is internal to medicine qua being science. The criticism of objectification, motivated by subjective experiences in healthcare settings, claims that objectification violates internal *moral norms* in medicine that govern the care of patients. Finally, the criticism of overmedicalization appeals to mixed sources. In some cases, the criticism appeals to external moral norms, maintaining that overmedicalization is reproachable because it masks the social sources of suffering or because it contributes to the increase in the number of healthy people who are seriously concerned about their health. In other cases, the criticism appeals to internal norms: the use of medical resources to address social or existential problems is not consistent with internal norms of medicine.

[8] This is often referred to as "immanent criticism" in the literature, particularly in the tradition of critical theory (see [37]). I will not observe this additional distinction for the sake of simplicity.

Third, the criticism appeals not merely to norms that are applicable to the practice, but to *constitutive norms*, understood in the sense that their violation is taken to undermine something that defines the practice. This is what is conveyed when O'Mahony laments the "corruption of medicine." In the same way, medicine's being implicated in overmedicalization and its failing to offer compassionate care driven by patient needs are taken to violate norms that are constitutive of medicine, not merely associated with it. At the same time, the criticism conveys that the *aim* associated with this practice cannot be achieved without adhering to these constitutive epistemic and moral norms.

The use of the criticism and the aim of medicine

While useful criticism tends to illuminate its subject, meta-criticism that systematically considers different strands of criticism can offer further contributions in this regard. I have so far shown that what is predominantly at stake are instances of internal criticism that appeal to constitutive norms of medicine, many of which are implicit. In general, implicit norms can be hard to identify, as one often first becomes conscious of their existence when they are violated. By underscoring norm violations, the criticism makes important steps toward making more or less implicit norms explicit, which enables subjecting them to rational scrutiny.

Moreover, I have further explicated the nature of the norms that the criticism appeals to. The skeptics' criticism appeals to epistemic norms in science; the criticism of overmedicalization appeals to norms governing medical knowledge that forbid certain uses; and the criticism of objectification appeals to moral norms that forbid a certain way of treating patients, even if their diseases are successfully removed. In the latter case, the criticism is informative in an additional way, because it shows that norm violation gives rise to "reactive attitudes" (e.g., indignation). Such reactive attitudes are best explained by positing the presence of implicit *moral* norms that are perceived to be violated.

In light of these results, another point emerges that further illuminates the subject. A better view of the normative sources of the criticism enables us to see that the criticism converges on a more fundamental question about the *aim of medicine*. The principal bad-making feature of perceived norm violations in practices is that these are either not consistent with or directly detrimental to the aim of the practice. When critics like O'Mahony call on medicine to change its course, this is based on a conviction that the violation of epistemic and moral norms hinder medicine in advancing toward its true aim. Of course, this does not imply that medicine needs to return to some earlier era at which it has succeeded in realizing this aim.

In spite of such reliance on assumptions about the aim of medicine, the criticism is offered without a systematic effort to identify what this aim might be. To better comprehend the criticism and to be able to assess whether it is justified, attaining clarity about the aim of medicine is essential and worthwhile for several reasons. The first reason is that without it, the scope and significance of the criticism is limited: as norms inherit their point from the *aim* of the practice, whether the criticism's appeal to norm violations is justified will depend on what the aim of

medicine is. As things stand, the three strands of criticism explored here implicitly assume that *medicine has a certain aim*. Moreover, the implicit assumptions of different strands are conflicting: the charge of overmedicalization seems to assume that the aim of medicine is the removal and prevention of disease, while the charge of objectification seems to assume that that aim of medicine is to enhance well-being in a wider sense. If it turns out that the former assumption is true, then much of the charge of objectification looks unreasonable. After all, the successful removal and prevention of disease does not necessitate eliminating the objectifying features that critics of objectification draw attention to. In contrast, if the latter assumption is true, then the charge of overmedicalization begins to look mysterious.

Things are slightly more complicated with respect to Stegenga's skeptical thesis. Although some of the arguments could be extended to domains of medicine, the thesis focuses on one kind of therapeutic intervention, namely intervention using pharmaceuticals, and does not systematically consider other types of standard interventions (e.g., surgical interventions, interventions in the form of radiation therapy or physical therapies, non-pharmaceutical rehabilitation procedures, lifestyle interventions). Moreover, in order for a medical intervention to qualify as effective, Stegenga's framework requires that it targets the constitutive causal basis of a disease, the harms caused by it, or both [18, p. 15]. This means that interventions that target conditions that are not "genuine diseases" (e.g., interventions on pre-disease states or on inappropriately medicalized conditions) are excluded. In addition, interventions in the form of vaccination are excluded because they aim to prevent the transmission of diseases rather than treat diseases [18, p. 179], while a large number of other interventions (e.g., contraception, abortion, relieving teething pain or menstrual cramps) are excluded because they neither target the constitutive causal basis of a disease nor the harms caused by it.

Anticipating the objection that his view builds on an overly narrow account of the goal of medicine, Stegenga [18, pp. 52–53] grants "the multifaceted goals of medicine and the plural activities of physicians", but stresses that his analysis applies to *one* goal in medicine, which is the improvement of health by intervening on disease. While this seems like a suitable reply to the objection, we may note that the consequences of the skeptical thesis for an overall assessment of medicine will depend on what the overall or final aim of medicine is and on how the goal that Stegenga's analysis applies to is related to it. For instance, the consequences of accepting the skeptical conclusion with respect to an overall assessment of medicine will be very different if one sides with critics of overmedicalization (i.e., the aim of medicine is the removal and prevention of disease) or if one sides with critics of objectification (i.e., the aim of medicine is to enhance well-being in a wider sense). In fact, critics of objectification could accept the skeptical conclusion while still holding on to the view that medicine as a whole is successful and produces significant progress.

There are at least two more reasons for thinking that attaining greater clarity about the aim of medicine is worthwhile. One is linked to the observation that criticism can illuminate its subject and offer clues for the solution of the problem that it points to. When dealing with criticism of a social practice, it seems straightforward that taking steps toward a solution is facilitated by an accurate

account of the nature of the problem, which depends on discerning the aim of the practice criticized. Without it, it is not clear what kind of resolutions are suitable with respect to the norm violations that propel the criticism. For example, by making a connection between aim and norms, one can discern whether the purported norm violation is an expression of a *local problem* (e.g., the norms of a practice no longer promote its aim) or a *systemic problem* (e.g., the norms of the practice are inconsistent). In the former case, problems typically have internal solutions, while in the latter they might resist a resolution within the current constellation.

Finally, it is very likely that the emergence of the different forms of criticism is in part an expression of a new uncertainty about the proper role and scope of medicine in modern societies. But in that case, reflection on the aim of medicine will not only help address the challenges that the criticism raises (i.e., determining the scientific nature of medicine, its proper boundaries, and the appropriate use of medical means) but also offer impulses to redefining medicine's function in society in the twentieth century. Philosophical work is well-equipped to assist with this task, beyond helping explicate norms in medicine and evaluating them in light of the aim of medicine that they intertwine with.

The aim of medicine: two accounts

While it seems safe to conclude that an account of the aim of medicine will help address the challenges that the criticism raises, this final section is dedicated to exploring and critically engaging two contemporary, influential accounts from the literature. They represent two approaches: one proceeds by identifying a single overarching goal, while the other catalogues a number of goals that medicine pursues. The reconstruction and discussion of these account will not be able to do justice to all of their details and the focus will be on illustrating important difficulties with providing an account of the aim of medicine.

Pellegrino's account

The first account to be considered here is due to Edmund Pellegrino.[9] Pellegrino defines clinical medicine as "the use of medical knowledge for healing and helping sick persons here and now, in the individual physician–patient encounter" [38, p. 563]. He argues that medicine has a fixed nature, defined by serving the aim of "healing," which resists cultural, political, and social changes. "Healing" lays bare the etymological connection between health and some notion of "wholeness," and the idea is that an act of "healing" is an act aimed at assisting someone to regain

[9] While Pellegrino's account is particularly helpful when it comes to illustrating some general difficulties, there are of course other accounts available, such as the one proposed by Alex Broadbent [13]. Moreover, there are also other "list approaches"—or "consensual" approaches (see Schramme [39])—that proceed by cataloguing several aims, put forward by Howard Brody and Franklin G. Miller, Bengt Brülde, and Christopher Boorse.

"wholeness." Because health—the ultimate end of healing—is often not achievable, Pellegrino stresses the difference between curing and healing and emphasizes that "healing" covers acts that aim to help restore psychological and physiological function and some sense of harmony. Pellegrino writes:

> To care, comfort, be present, help with coping, and to alleviate pain and suffering are healing acts as well as cure. In this sense, healing can occur when the patient is dying even when cure is impossible. Palliative care is a healing act adjusted to the good possible even in the face of the realities of an incurable illness. Cure may be futile but care is never futile. [38, p. 568]

Correspondingly, Pellegrino [38, p. 569, 40, 41] operates with a positive and broad notion of health. As the ideal end of healing, health is on his account "the good of the whole person," which is quadripartite (medical, personal, human, and spiritual good) and hierarchically organized. This means that in the clinical encounter, the good which must be served is not merely some narrowly construed "medical good" conceived of in terms of restoring normal functioning, but "the good of the patient as a spiritual being, i.e., as one who, in his own way, acknowledges some end to life beyond material well-being" [38, p. 570]. While Pellegrino recognizes that physicians are not experts on all of the relevant dimensions, he stresses that the pursuit of the "medical good" has to harmonize with the other goods, while upholding the moral priority of the highest good over the lower ones.

> Whatever the origin and content of one's spiritual beliefs, the three lower levels of good I have described must accommodate to the spiritual good. For example, blood transfusion might be medically "indicated" for the Jehovah's Witness, abortion of a genetically impaired fetus for a Catholic, or discontinuance of life support for an Orthodox Jew. But in these cases, the mere medical good could never be a healing act since it would violate the patient's highest good. [38, pp. 570–571]

Pellegrino's claim that medicine has some fixed nature and aim that resists cultural, political, and social changes might strike us as problematic when considering the transformations that medicine underwent in response to changes in the moral and social landscape of our societies. Consider for instance that since World War II, clinical medicine and medical research have undergone substantial changes, reflected, for instance, in new guidelines for truth-telling and confidentiality.

Sidestepping this issue, Pellegrino's account appears directly relevant to the criticism of objectification and thus relevant to addressing challenges with respect to the appropriate use of medical means. As "healing" describes acts aimed at assisting someone to regain "wholeness" which includes psychological and physiological functioning and some sense of harmony, objectifying features, as described in section six are clearly identifiable as incompatible with the aim of medicine. However, this aspect of Pellegrino's account generates problems for thinking about overmedicalization and determining the proper boundaries of medicine. The combination of designating "healing" as the aim of medicine and operating with a broad notion of health and healing renders the account overly permissive.

At least at first, "healing" seems to exclude a large number of common interventions like contraception or sterilization, and it is hard to see how "healing" might be used to adequately describe the lifelong management of a chronic condition. But given that Pellegrino uses a broad notion of health and explicitly stretches healing to include "comforting" and "being present," this worry can perhaps be accommodated. However, on such a relaxed notion of healing and health, comprehended as a kind of well-being that even includes a spiritual dimension, the question is whether Pellegrino's account is able to place any limitations on what medicine can permissibly promote. While stressing the dimension of care is commendable, the consequence is that most issues that affect well-being and that could potentially be addressed by medicine become legitimate objects of medical attention. It is unclear how such an account could deal with cases of purported overmedicalization.

Pellegrino's expansion of the proper scope of medicine generates consequences that are hard to accept. For example, if health is well-being in a sense that includes a dimension of spiritual good, then somebody who has no disease but is spiritually out of balance is not fully healthy. The general idea that what counts as proper healing has to be adjusted to the good of the patient is not erroneous, but if one allows that what counts as healing is dependent on the spiritual values of the patient, then we end up with a notion of health that is to a very large extent relative to the patient's ideas about life. In addition, the idea that violating the patient's highest good cannot count as healing collapses health into well-being.

The Hastings Center consensus report

Instead of trying to identify one overarching goal like Pellegrino, list approaches proceed by cataloguing a number of goals that medicine pursues. For example, the well-known consensus report by the Hastings Center offers a list of "four goals of medicine" [42]:

(1) the prevention of disease and injury and the promotion and maintenance of health.
(2) the relief of pain and suffering caused by maladies.
(3) the care and cure of those with a malady, and the care of those who cannot be cured.
(4) the avoidance of premature death and the pursuit of a peaceful death.

These goals leave open a number of questions and I will not dwell on the myriad issues raised by critics (see, e.g., [43]). Instead, I simply wish to note that given the broad definition of health that the authors operate with, the second part of the first goal—namely, the promotion and maintenance of health—actually encompasses most of the other items. Promoting and maintaining health surely includes the care and cure of those with maladies (the third goal); and caring for and curing those with a malady, in turn, involves relieving pain and suffering caused by the malady

(the second goal). The first goal also clearly covers the first half of the fourth goal (i.e., the avoidance of premature death), while the second half of the fourth goal (i.e., the pursuit of a peaceful death) is subsumed under the second half of the third goal (i.e., the care of those who cannot be cured).

More importantly for my purposes, as was the case for Pellegrino's account, the consensus report is directly relevant to the criticism of objectification. The fourth goal highlights an important dimension of care, which involves "the empathetic and continuing psychological care of a person who must, one way or another, come to terms with the reality of illness. … Medicine may have to help the chronically ill person forge a new identity" [42, p. 13]. On such an account, objectifying features can be identified as incompatible with the aim of medicine.

However, as with Pellegrino's account, this aspect generates problems for thinking about overmedicalization and the proper boundaries of medicine. Without adding further constraints, the first goal renders medicine overly inclusive and unable to deal with cases of purported overmedicalization. Further, the promotion and maintenance of health not only includes the prevention of disease and injury, but goes well beyond it. If the promotion of health is not further specified, then it can be taken to include legal health protection, free warm meals in schools, and political measures to increase the number of ICU beds in a geographical location. But even if we limit the promotion of health to the prevention of disease and injury, this increases the proper objects of medical concern to include a vast array of things like seat belts in cars, emergency exits in lecture halls, and carbon monoxide detectors.

The authors use the notion of malady instead of speaking of sickness, disorder, or disease, as most of the literature does. The authors define *malady* in the following fashion:

> The term "malady" is meant to cover a variety of conditions, in addition to disease, that threaten health. They include impairment, injury, and defect. With this range of conditions in mind it is possible to define "malady" as that circumstance in which a person is suffering, or at an increased risk of suffering an evil (untimely death, pain, disability, loss of freedom or opportunity, or loss of pleasure) in the absence of a distinct external cause. [42, p. 9]

The addition of "external cause" excludes cases of suffering brought on by war or violence. But without additional constraints, malady is exceedingly inclusive: the loss of freedom or opportunity can be caused by a large number of things like old age, baldness, lack of musical skills, or pregnancy, which would all qualify as maladies. Concerns about inclusiveness are exacerbated by the fact that the notion of health the authors deploy goes beyond the absence of malady. After suggesting that health is "invisible" in the sense that it is not something one usually notices, the authors define *health* in the following manner:

> By "health" we mean the experience of well-being and integrity of mind and body. It is characterized by an acceptable absence of significant malady, and consequently by a person's ability to pursue his or her vital goals and to function in ordinary social and work contexts. [42, p. 9]

There are several issues to mention here. It is not clear how one can depict health as something that is phenomenologically "invisible," not directly experienced unless it is damaged, while also defining it as a particular *experience* of well-being and integrity [42, p. 9]. The emphasis on health as based on something phenomenologically salient seems inconsistent with the idea that health is phenomenologically "invisible." Perhaps the authors could say that health is invisible in the sense that it only figures in the background of one's experience of the world, but even so, collapsing the difference between health and well-being also raises an issue briefly explored in our discussion of Pellegrino's account. It leaves unresolved cases in which experiences of well-being and integrity are had by people who have undetected but potentially lethal diseases, or when healthy people fail to experience well-being and integrity (e.g., if one is exhausted, has low-grade anxiety, or has gastrointestinal discomfort).

The account allows the authors to identify uses of medical knowledge are not compatible with the aim of medicine, such as objectifying practices as well as the participation of physicians in torture and capital punishment. But when it comes to more controversial interventions, the authors note that activities that could be acceptable under some circumstances include "the use of medical knowledge to enhance, or improve upon, natural human characteristics" [42, p. 15]. Given that the notion of health that the authors deploy goes beyond the absence of malady, this feature constitutes an additional reason for thinking that the account is overly inclusive and unable to deal with the criticism of overmedicalization.

Overall, while both accounts under consideration are able to identify objectifying practices as incompatible with the aim of medicine, they encounter problems with determining the proper boundaries of medicine. As a result, their accounts of the aim of medicine will not be able to suitably address purported cases of overmedicalization. Such failure is not unrelated to the conflict that I identified between implicit assumptions in the criticisms of overmedicalization and objectification. Indeed, one might suspect that accounts on which the aim of medicine is broad (e.g., consisting in "healing," like for Pellegrino, enhancing well-being, or targeting "malady" as in the Hastings Center report) will be able to appropriately address the criticism of objectification, but not that of overmedicalization. In contrast, accounts claiming that the aim of medicine is narrow (e.g., consisting in the removal and prevention of disease) will likely be able to properly address the criticism of overmedicalization but not that of objectification. Such a conclusion is modest, but it nevertheless helps clarify important challenges associated with the task of offering a suitable account of the aim of medicine.

Conclusion

The paper has directed focus to dominant forms of criticism targeting contemporary medicine, attempting to offer a better comprehension of their normative character and the challenges they convey. It was argued that the criticism is comprehensive (raising questions about both medical science and medical practice), mainly internal (relying on standards of evaluation that are assumed to be internal to medicine), and

converges on a larger question about the aim of medicine. Further work making the internal norms of medicine explicit and determining the aim of medicine would not only help clarify to what extent the criticism is justified and coherent but also assist an informed deliberation about the future of medicine. The final section critically engaged Edmund Pellegrino's account and the Hastings Center's consensus report, illustrating some general difficulties associated with such a task.

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