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The muddle of medicalization: pathologizing or medicalizing?

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Abstract Medicalization appears to be an issue that is both ubiquitous and unquestionably problematic as it seems to signal at once a social and existential threat. This perception of medicalization, however, is nothing new. Since the first main writings in the 1960s and 1970s, it has consistently been used to describe inappropriate or abusive instances of medical authority. Yet, while this standard approach claims that medicalization is a growing problem, it assumes that there is simply one "medical model" and that the expanding realm of "the medical" can be more or less clearly delineated. Moreover, while intended to establish the reality of this growing threat, this research often requires making arbitrary or unjustified distinctions between different practices. To better clarify the concept of medicalization, I will focus more on capturing the variety of medical practices than on the sociological aspects of medical discourse. In doing so, I will explore the distinction between medicalization and pathologization, a distinction that is often overlooked and that brings with it many conceptual and practical implications. After defining these terms, I will use some examples to show that while pathologizing is closely tied to medicalizing, both can occur independently. I will then further develop this distinction in terms of the different individual and social effects of these practices.

Keywords Medicalization · Pathologization · Medical model · Social model · Biomedicine

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[With] the widespread medicalization of society … [v]irtually any human difference is susceptible to being considered a form of pathology, a diagnosable disorder, and subject to medical intervention. [1]

Introduction: what's in a name?

Medicalization has become one of those issues which appear both ubiquitous and unquestionably problematic. Nearly any reference to it seems to signal at once a social and existential threat, such as when Allen Frances, a former chair of the DSM task force, writes that the latest edition of the DSM-5 and the ever-growing power of Big Pharma are contributing to the "medicalization of ordinary life" [2]. This perception of medicalization as a growing threat, however, is nothing new. It dates back at least to the 1960s and 70s with the ideas of various sociologists, physicians, and theorists, such as Ivan Illich, Irving Zola, Thomas Szasz, Michel Foucault, and later Peter Conrad and Joseph Schneider. Each has contributed in their own way to the development of the so-called medicalization thesis [3], which aimed to capture how various conditions, behaviors, or experiences which were previously under legal, political, or religious surveillance, and as such were not "inherently medical," were becoming *increasingly* defined as medical entities to be labelled and treated [4]. This has led to the common view, which can be found in the medical sociology and anthropology literature (e.g., [5]), that "Medicine used to claim authority over the cracks and interruptions in life; now it claims authority over all of life" [6, p. 2].

Through subsequent analyses, this thesis has been expanded to cover not only the development and application of medical categories, but also to capture how "the populace has internalized medical and therapeutic perspectives as a taken-for-granted subjectivity" [1, p. 14], with medicalization riding on the waves of consumer and market culture. Whether this expansion is understood in terms of different "engines of medicalization" [7], or by analyses charting the expanding nature of biomedicine since roughly 1980 with the concept of "biomedicalization"[1] [8], it seems uncontroversial to claim that this concept was and is mainly understood as a critique. In other words, "'medicalization' is usually used in the sense of *inappropriate* medicalization" [6, p. 35] or simply as "overmedicalization" [1, p. 146]. Most broadly, "The concept of medicalization has been put forward in order to name, analyse and criticise the changing role of medicine in modern society" [9, pp. 90–91]. This concept has thus been used to denounce various trends in twentieth-century (Western) medicine, such as the usage of medical categories and treatments to control deviant behavior, the widening of diagnostic categories ("disease mongering"), the commodification of health, the problem of iatrogenesis, the tendency to obscure the social or political context of illness, the privatization of

[1] While I agree with Conrad [1, p. 14] that "biomedicalization" analyses are helpful, even if much of the same critiques can be made within the medicalization framework (e.g., [7]), I disagree with Conrad that biomedicalization's broader approach compromises medicalization claims. I therefore diverge from both approaches. Contra Conrad, I claim that medicalization is arbitrarily narrow, and contra biomedicalization theorists, I feel that its clarification will entail a broadening that might further question the novelty of their conceptual distinctions.

medical practice, and the role of pharmaceutical companies in shaping diagnoses and treatments, to name a few (e.g., [1, 4, 6, 8, 10–18]).

This standard approach to the study of medicalization has problematic consequences. On the one hand, subsequent theoretical or conceptual analyses have centered more on these various problems and less on attempting to clarify what constitutes medical reality and practice. This is explicitly acknowledged by many, such as when Conrad claims that his interest is not with adjudicating what is "really" medical but simply with describing how a definition becomes "viable" in a given society [1]. While this suggests an attempt to avoid making normative claims, many have pointed out that it takes for granted what it seeks to explain [19–22]. In other words, while this approach claims that medicalization is a growing problem, it assumes that there is simply one "medical model" and that the realm of "the medical" which is expanding can be more or less clearly delineated. Even the few philosophical attempts to clarify the concept of medicalization also carry these presuppositions [23] or set them aside and proceed "as if" the medical had some clarity [24]. On the other hand, while the aim of these various researchers has been to establish the reality of this growing threat, doing so often requires either not making justified distinctions between different practices or making arbitrary ones. It is this muddling that I seek to address.

In order to better clarify the concept of medicalization, I will focus more on the practices that are usually highlighted by this concept rather than on the sociological aspects of medical discourse [9]. In doing so, I will follow some previous suggestions in distinguishing medicalization and pathologization [19, 24, 25]. At first sight, this distinction might seem obvious or trivial, but these practices are often conflated. For instance, medicalization is often defined as a process whereby (bio)medical jurisdiction expands by means of the "extension of pathological terminology to cover new conditions and behaviors" [26, p. 15] (see also [9] for similar claims). Some assert that "Medicalization pathologizes what might otherwise be considered as simply variations of normal human functioning" [27, p. 138], and others describe public health interventions as involving "medical interventions without medicalization" [1, p. 160]. I will argue instead that medicalization is broader than pathologizing, and that pathologization may occur outside of any medical intervention. Avoiding such a conflation will allow for new ways of understanding the implications of these practices. After providing a general definition of these terms, the first three sections will use some examples to show that while pathologizing is closely tied to medicalizing, distinctions can be made between these practices. I will then further develop this distinction by exploring how these two practices can have different individual and social effects when employed. In the end, the aim is not to deny the thesis that medicalization is a problem or "growing threat," but to help clarify what that threat is, to better focus our critical analyses, and to better assess the "good" and "bad" aspects of medicalization [20, 24].

Disentangling medicalization and pathologization

The distinction between medicalization and pathologization seems to be implicitly at work in many researchers, yet it remains undeveloped. For example, Conrad and Schneider, two key pioneers in the medicalization field, state that medicalization

may or may not include physicians and medical treatment, even if it often does [4, p. 278]. Conrad makes this more explicit when he distinguishes between definition and intervention as distinct aspects of medicalization [1, p. 126], implying that when a condition is defined as pathological, it is only part of what constitutes a problem as medical, the other part being its treatment [1, p. 5]. Medical anthropologist Didier Fassin [19] has more explicitly called for the need to distinguish these two practices so as to understand how certain conditions, e.g., drug addiction, can be de-pathologized while still being medicalized: a condition can be treated medically even if it is not considered pathological. Even the simplest definitions of medicalization, e.g., "a process by which human problems come to be defined and treated as medical problems" [24, p. 412], still lump definition and treatment together as aspects of medicalization, rather than teasing them apart.

This conflation may stem from a general lack of attempts to question whether "the medical perspective," even modern biomedicine with all its technological possibilities, is reducible to a single medical model. This oddly reductive assumption is implied by many authors. For example, public health measures are described as involving "medical interventions without medicalization" [1, p. 160]. While primary prevention is the dominant intervention to many health problems, without a "medicalized clinical entity," it is not seen as medicalization [28, 29]. This demoting of prophylactic medical measures can also be seen in Raymond Downing's claims that changing sexual behaviors, altering one's diet, prohibiting alcohol consumption, addressing lifestyle-induced stress, and even the introduction of hand-washing in delivery rooms, are "not 'medical'" [6, p. 50] and are even the "opposite of medicalization" [6, p. 53], presumably because they do not employ some biotechnology. For Downing, prevention was simply what people did "before medicalization" in order to live a healthy life, whether this was enforced by social norms or not [6, p. 89]. But to what realm of human practices do hand-washing, dieting, and public health belong if not "the medical"? And why would making medical techniques safer imply their "demedicalization" [6, p. 37]?

One explanation is that, in many cases, medicalization is too quickly conflated with pathologization and the realm of "the medical" is too arbitrarily delimited. In other words, many sociological theories not only focus on certain forms of treatment rather than others, e.g., those narrowly defined as "biomedical" [6, p. 35], but also arbitrarily focus on certain periods of medical history, and in doing so, problematically distort the varieties of medical practice. In order to better clarify these issues, a distinction should be drawn between the practices of definition and diagnosis, on the one hand, and treatment or intervention,[2] on the other. If *pathologization* involves the ways in which certain conditions come to be labeled as pathological by medical institutions (definitions), in the clinic (diagnoses), or by self-labeling, then *medicalization* could be seen as involving various types of medical responses and interventions or treatments that are justified in relation to

[2] Here, I differ from Nick Haslam's folk designations of "pathologization" as implying a deviation from norms, while being agnostic about causes, and "medicalization" as implying a deviation that is internal and somatic, with the implication that it is beyond the individual's control [25]. While these concepts may be found in some parts of the general public, they are still kinds of disease labeling, and therefore, treatment or intervention remains unspecified.

health concerns [24]. As interventions or treatments can be carried out with or without medical authority, and can be performed by individuals, physicians, or even by social institutions, medicalization would then encompass the ways in which medical knowledge and techniques promote salubrious behaviors or produce therapeutic responses to what is deemed to be pathogenic, pathological, or undesirable in the individual or social body.[3] In this view, medicalization is a much broader set of practices than pathologization, and while they might be linked, they do not always overlap. As I will show, such a broad approach better captures the variety of medical practice and can allow for different analyses of their effects. I will now discuss some examples to better illustrate and support this distinction.

Medicalization without pathologization

Many examples show how medicalization need not imply pathologization. Possibly the most obvious are the newer designations of individuals "at risk" for a given condition, e.g., hypertension or hypercholesterolemia, and the various biomarkers for all sorts of diseases, be they genetic, hormonal, physiological, etc. [8, p. 64]. While in some cases, this can entail a redefinition of the line between healthy and pathological, as is the case with cholesterol levels [30], it need not. It is here that claims often go too far in asserting that "medicalization pathologizes" since having a risk factor is not the same as having a disease, even if being considered "at risk" entails new treatment options and increased medical surveillance [31]. While this form of preventive medicine—with treatments even preceding the pathologization of a condition—is what is usually understood as "medicalization," this need not entail pathologization. In fact, when treatments precede disease definitions, the distinction is already at work.

While medicalization has been applied to a variety of conditions or experiences, it is quite clear that many conditions need not be considered pathological for them to elicit medical attention. While some worry that the sheer fact of medicalizing pregnancy will turn "every birth into a pathological process" [6, p. 37], surely such claims are overstated, if only due to the fact that the concern is more with complications than pregnancy per se [11, p. 225]. The same applies to the medicalization of male baldness, which has seen an increase in various treatments from pills to surgery without it being considered a pathological condition [1, pp. 34-39]. It is also possible, as mentioned above, that some conditions can be depathologized while still being medicalized. Fassin describes a shift in France from defining drug addiction in terms of pharmacological dependence (disease) to psychological suffering, the latter being understood as a "normal" response, but one that still requires medical attention [19].

This distinction can also be made by focusing either on individual or social-level issues. On the individual level, it is possible (though controversial) to define

[3] In this article, I use "intervention" and "treatment" synonymously as I feel that the line between them is too thin to be helpful. While the aims of curing, rehabilitation, and enhancement are distinct, all are tied to medical knowledge and practices [21, 22]. Consequently, curing diseases, medical enhancements, lifestyle interventions, and even public health measures are all ultimately instances of medicalization. This will be further justified below.

congenital impairments such as deafness or blindness as non-pathological, as involving different functional norms [32], while still seeing how individuals with these differences could benefit from medical knowledge or intervention, such as developing a social or architectural environment that is more conducive to their behavioral capacities. While the "social model" of disability is often seen as opposed to the typical medical model [33], the attempts to make urban environments more salubrious or more conducive to being navigated by those with impairments are thoroughly tied up with medical norms and techniques.[4] Similarly, the issue of enhancement, while difficult to define, can also show how medical attention or intervention need not assume a pathological condition, such as in the development of contact lenses, cosmetic surgeries, and doping in sports [1]. While this medicalization can indeed involve the redefinition of a previously normal part of human variation as pathological, such as what is happening with idiopathic shortness [1, pp. 77–81], this is neither a necessary starting point nor consequence.

On the social level, there is a long history of linking medical expertise to personal hygiene practices, dietary and exercise regimes, or general ways to improve one's health [34]. To account for these practices, Conrad suggests that we distinguish between medicalization and "healthicization" [35, p. 223]: the former turns social or natural events into medical problems, focusing on biomedical causes and interventions, whereas the latter redefines behaviors and lifestyles in relation to medical events, thereby stressing behavioral causes and interventions (such as linking exercise and diet to heart disease). While interesting, this also problematically and arbitrarily narrows "medicalization": what would distinguish a medical institution's promotion of a particular dietary intervention for preventing or treating a disease from a pharmacological intervention? Is there a fixed line between lifestyle interventions and "biomedical" ones? Since lifestyle interventions have been with medicine since its inception [36, 37], it seems more accurate to argue that medicalization far exceeds the clinic and often occurs without pathologization.

This can be seen in different contexts. For example, vaccination, a practice that has saved millions of lives and contributed to making urban existence more tolerable, is a clear example of medicalization being employed as a form of prevention, rather than disease treatment [21]. While this type of intervention is done to individuals, it cannot be understood apart from the practices of public health or "herd immunity," blurring the lines between individual and social interventions. Concerning public hygiene, one could also include the medicalization of living and working conditions that occurred through various sanitation practices, from sewage development to the submission of factories or even apartment buildings to hygiene regulations [37–39]. While the latter practices are rarely seen as forms of "medicalization," one cannot understand their existence and justification apart from (bio)medical knowledge and medical techniques [22]. Excluding them would again arbitrarily restrict the medical realm.

More interestingly, John Sadler et al. claim that if a given behavior or practice, such as running, dieting, or public health measures, is explicitly *justified* based on its relation to health concerns or benefits, then it should be seen as an instance of

[4] These issues will be further explored in a follow-up essay on individual and social models in medicine.

medicalization [24, p. 414]. While this approach might greatly expand what is included in the medical realm, it also seems to better capture the diversity of medical explanations and treatments than does the medicalization-healthicization distinction. Moreover, the medicalization of something like running for exercise does not imply the pathologization of some normal behavior (e.g., inactivity), but rather, the internalization of medical norms. As sociologist Nikolas Rose writes, "We relate to ourselves and others, individually and collectively, through an ethic and in a form of life that is inextricably associated with medicine in all its incarnations" [21, p. 701]. In this sense, lifestyle interventions are applications of medical techniques, which can either be prescribed by a doctor or self-applied with the intention of self-improvement. Accounting for the breadth and diversity of the medial realm may thereby help to resolve the general ambiguity as to whether interventions such as behavioral alterations or even altering environments can be seen as "proper" instances of medicalization.

Such examples show how medicalization can exist without implying that what is being medicalized is merely a pathological condition. Medicalization may indeed be a response to pathologizing, but it also picks out those practices and techniques—some social, some individual—aimed at responding to the undesirable or the pathogenic, be it in the individual or in the environment [39]. Thus it is not true that there is simply one medical model or that by definition or by necessity "medicalization pathologizes." Now, showing how pathologization can be disentangled from medicalization is somewhat trickier.

Pathologization without medicalization

To see pathologization on its own, one might start by acknowledging the ability to define and diagnose conditions in other species without involving any medical intervention.[5] In other words, while such pathologization would certainly be the result of medical knowledge, this need not imply or entail medicalization in the sense of the application of medical treatment. While speculative, it might also be claimed that only in those species which have evolved ways to self-medicate [40], or which have different levels of complexity in terms of healing practices [41], does pathologization imply medicalization: there, disease calls out for treatment. Humans have one of the most complex set of behavioral traits that allows us to go beyond our biological self-regulating capacities so as to develop new ways of responding to sickness. Consequently, this non-indifference to our own suffering and to that of others, coupled with the labeling of something as abnormal or pathological, will often entail healing practices to alleviate this suffering [45]. In this sense, pathologization is closely tied to medicalization. Yet, medical history provides some examples of where diagnoses did not entail medical intervention.

First, there are examples from 17th and 18th-century Germany with Georg Stahl and Friedrich Hoffmann, whose ideas can be traced back to some Hippocratic writings, of appealing to the healing powers of nature working within the body

[5] Thanks to Maël Lemoine for this point.

[42, pp. 26, 31]. The observations that not all treatments work and that some patients heal without a doctor produced ideas of "expectant medicine" or "therapeutic nihilism." In this tradition, since the body is thought to have its own self-regulating and self-healing abilities, medicine implies a kind of patience or passivity. Here, while there is medical attention given to the individual, what this attention consists in is pathologizing, explaining an individual's symptoms as pathological, but without attempting to intervene or medicalize so as to alleviate those symptoms: a disease without a treatment, a definition without intervention. In more recent examples, while chronic illness can be seen as highly medicalized in modern societies [14], it might also be de-medicalized while still being pathologized, such as when medical interventions are avoided because they are increasingly harmful (e.g., during the latter stages of a terminal illness) or when an individual simply chooses to self-manage their condition [43]. While the latter can be seen as a case of "self-medicalization" [44], which I will discuss below, it can also be a matter of simply letting nature "run its course." In such examples, there is still the pathologization of one's condition (by doctors or by the individual), but it becomes de-medicalized when medically-oriented responses are discontinued. This does not imply that the true opposite of medicalization is to do nothing, but again, that medicalization involves health-directed *practices* [24], whether self-imposed or as interventions guided by a doctor or healer.

Thus, while the concepts of health and disease are clearly tied up with the history of medical institutions [45], and while pathologization is what often allows medical institutions to justify their interventions, the practice of pathologization is only contingently tied to medicalization. The examples in the previous sections were meant to show that interventions or treatments can be carried out without labeling a condition pathological (medicalization without pathologization) and that the practice of labeling or diagnosing a condition as pathological need not lead to medical interventions (pathologization without medicalization). It is important to note that while there is clearly overlap between these practices, it seems that the overlap is not total. Of course, the two will likely converge, often intentionally (e.g., pathologizing *so as to* medicalize, or vice versa), but I have at least shown how they can begin as or become distinct practices.

The effects of pathologization and medicalization

Another way to distinguish between pathologization and medicalization is to explore how each can have distinct effects and can be desired by individuals for different reasons. First, the usual list of benefits associated with "medicalization" seems to fit better with pathologization. For example, it has long been pointed out that the sick role grants individuals various social protections and allowances [4, 46]. Such protections and allowances seem to hold even if no treatment is provided. Pathologizing can provide an optimistic prognosis, further supported by being seen as scientifically legitimated, since to see a condition as something gone awry in the body suggests that it can be changed rather than being an intractable part of one's personality [1, p. 147]. In other words, a given set of undesirable behaviors

or experiences can be reconceptualized ("it is not me but my disease"), and diagnoses can provide coherence to what might seem to be unrelated or incomprehensible symptoms [47]. Finally, while pathologizing can reinforce cultural stereotypes about mental illness and perceived dangerousness [48], it can also contribute to the reduction of blame and stigma [1, 49]. With certain conditions, such as chronic fatigue syndrome [47], Lyme disease, or fibromyalgia, individuals even actively fight to get diagnosed, not only to receive treatment but also to legitimize their suffering through the use of the disease label [50, p. 152]. Conrad discusses how with adult ADHD, its diagnosis and treatment are often embraced and promoted by those who receive them [1, pp. 67, 139]. Medical historian Harry Oosterhuis has even looked at how many individuals in the 19th century welcomed Krafft-Ebing's pathologization of their sexual "perversions" as it relieved them of their moral guilt [51]. For many, being considered sick was and is a liberation, not a condemnation, even if there is no treatment.

Concerning medicalization, there are many benefits associated with the various ways of responding to the pathological or the pathogenic, not to mention general health promotion. While the alleviation of suffering is the most obvious benefit, medicalization can also be beneficial by providing more humane forms of treatment, as can be seen, for example, in the different responses to something like epilepsy throughout history as it went from a form of "badness" to "sickness"—from involving demon possession requiring punishment or isolation to a biological dysfunction requiring understanding and care. The example of enhancement can also be seen as an instance in which individuals seek out medicalization, and while this might contribute to the erasing of individual differences or even supporting some cultural values [1], it can also challenge them, such as when surgical modifications help to make individuals more comfortable with their bodies (e.g., those with various forms of body dysmorphia), or even when bodily modifications render individuals anomalous or unique (e.g., Erik Sprague, aka, "Lizardman"). There are even individuals who contemplate the amputation of otherwise "normal" limbs or the introduction of mechanical limbs so as to augment their sporting capacities [52]. In today's consumer culture, medicalization is often actively sought out, desired, and even demanded as a right by these patient-consumers [53], often through a doctor-patient negotiation [3], while not implying and sometimes even rejecting the pathologization of one's body or experiences.

Medicalization can even involve increasing one's feeling of self-control, such as with birth control and medicalized pregnancies. These are cases of medicalization that are not only desirable for many (not least to avoid more serious problems, such as miscarriages or STDs), but can entail giving women more control over their bodies by allowing them to return to work sooner or to avoid unnecessary pain [3, 20, 54]. Along similar lines, it can even contribute to granting new rights to those medicalized, thereby re-politicizing a condition. This is how Fassin describes what happened with drug addiction in recent years in France (which, recall, involved the depathologization of addiction) [19]. Through the development of needle exchange programs, individuals were granted a right to life and the freedom to govern their own actions. By creating new guidelines, rules to follow, and authorities to respect, the resulting medicalization without pathologization produced new possibilities for

moral action. Here, medicine did not replace moral or political norms, but created its own.

So far, I have been looking at the effects of pathologizing or medicalizing from the "top down," so to speak, whereby these practices are mainly carried out by medical institutions labeling and treating individuals. However, the general distinction between pathologizing and medicalizing seems to hold even when carried out by the same individual [44]. One can self-pathologize without invoking any self-medicalization, since it may be the case that one does not know how to respond to a self-diagnosis, may lack the means to do so, or may simply refrain from treatment. On the other hand, one could self-medicalize or self-medicate for various reasons that need not imply illness, such as exploring ways to improve or enhance one's physical or mental performance through dietary or lifestyle changes [55]. As I mentioned above, while enhancement is often discussed in the context of seeking out medical operations or pharmaceutical interventions, the rather ancient intention of using diet or lifestyle to alter one's health—self-enhancement—still falls under the view of medicalization being proposed here.

One might object that some of these effects can be shared by both practices: e.g., the protections and allowances afforded to the sick role seem to accrue through pathologization or medicalization. While these two practices can be distinguished in terms of their general characteristics, e.g., diagnoses and therapeutic interventions, some of their effects can overlap since both pathologization and medicalization can be at work at the same time. Arguing that one can provide somewhat clear distinctions between these practices does not escape the rather messy consequences of how these practices are implemented.

Conclusions and implications

The distinction between pathologizing and medicalizing has been made to better capture different forms of medical knowledge and practice, as well as the effects they have on the individuals receiving medical attention or applying it to themselves. While there is often a tight link between pathologizing and medicalizing, the inverse is not the case, as the realm of medicalization exceeds disease definition and its application. Consequently, the problems highlighted by the so-called medicalization thesis need to be reconceptualized. On the one hand, while I would generally agree with many theorists concerning the growth of medicalization (or pathologization), this growth can take on many different forms, requiring more specific claims concerning the effects of this shifting medical attention. My approach admittedly expands the scope of medicalization analyses to include many different aspects of medicine: from public health interventions and lifestyle interventions to the wide range of clinical treatments, interventions, and enhancements, all of which involve responses to the pathological *as well as* the pathogenic. Rather than decry the extension of this concept and claim that more "rational" or scientifically-informed societies may end up limiting medicalization [3], I would argue that this extension is both epistemologically and practically useful. First, while accounting for problematic extensions of medical authority, it also accounts

for generally accepted or uncontroversial instances, such as diagnosing and treating cancer, cardiovascular disease, diabetes, or Alzheimer's. It thereby helps to better capture the variety of medical practices and techniques, rather than arbitrarily limiting "the medical realm" to a subset of these, e.g., as "healthicization" or "biomedicalization," as well as accounting for the various instances in which such practices and techniques can have beneficial effects.

On the other hand, the tendency of medicalization theorists to imply that expanding medical authority is menacing or by definition morally problematic is by no means justified as there are many instances in which this is not only desirable but actively pursued. The main problems that seem to face contemporary medicine and bioethics are thus less medicalization as such (as it is traditionally understood) than its abuses [54], such as problematic diagnoses, dangerous and unjustified medical treatments, the erosion of individual liberties, the continual rise in diagnosing and medicating the most vulnerable, from children to the elderly [2, 9, 15, 16], and what is often linked to these problems, the reduction of medical explanation and treatment to *only* the individual or pharmaceutical model [10]. To be clear, I do not deny the seriousness of these problems or claim that modern medicine should be exculpated from its abuses. Such critiques, however, do not exhaust the concept of medicalization and often distort the multifaceted nature of the medical perspective.

Moreover, since a condition can be labeled pathological without the need for distinct medical attention, and since medical attention can be focused on a given condition without this implying a pathology, more fine-grained analyses can reveal different concerns. This distinction converges with the recent suggestion that there can be positive and negative forms of medicalization [1, 20, 24]. For example, distinguishing pathologization and medicalization can help to show how "disease mongering" exists alongside symptom-legitimizing self-diagnoses; how, while treatment can be enforced, it is often desired, even without a disease; how, while health and disease can be commodified, these categories are also sought out and can be emancipatory; how, while social-political conditions can be bracketed, self-medicalization and advocacy groups can collectivize individual suffering; and how, while medicine can treat individuals, it can also lead to changed living or working conditions. Of course, these different consequences do not imply that one is clearly positive or negative, but as they are real possibilities, the descriptions of pathologization and medicalization should be the beginning, not the end, of critical analyses [21].

Ultimately, while the concern here is not that of providing criteria with which to judge whether a given instance of pathologizing or medicalization is beneficial or harmful, the suggestion is that more accurate claims about such benefits or dangers can be made once the practices involved are clarified. One thus needs to ask: is the concern the disease label or a medical intervention or treatment? For example, the problem behind "disease mongering" seems more an issue of pathologizing "normal" behavior than that of promoting treatment for (i.e., medicalizing) such behavior. The effects of this pathologization will depend on the condition being discussed since, as I showed above, the pathologization of some conditions may be welcomed or rejected: sometimes by doctors, sometimes by those with the condition being pathologized. Conversely, where pathologization becomes secondary or even

incidental to the issue of receiving treatment, medicalization is the focus. For example, while there is controversy around personalized or lifestyle medicine and its emphasis on behavioral or environmental interventions [56], the issue is less that of pathologizing behaviors than seeing them as instances of medical interventions guided by medical authorities. Due to its ancient roots and in light of the potential benefits of lifestyle medicalization for preventing or treating modern chronic diseases [57, 58], case-by-case analyses are needed to avoid general claims about the "threat" of such medicalization. Finally, if pathologization and medicalization are distinct, what does this mean for the oft-repeated claim that medicalization "biologizes," "naturalizes," or "individualizes" human problems, focusing on what is going wrong "in the individual" and thereby de-politicizing or obscuring social causes and interventions [1, 11, 59]? While individual conditions are often the focus of pathologization, this need not preclude a focus on the environmental and social causes of such pathologies. In some instances, might it not be possible to medicalize the social and environmental causes of health and disease [60]? If this is one of the aims of "social medicine" [39], then what would be the effects of such social medicalization? New answers to such questions might shed a much different light on the aims and implications of medicalization.

References

1. Conrad, Peter. 2007. *The medicalization of society: On the transformation of human conditions into treatable disorders*. Baltimore: Johns Hopkins University Press.
2. Frances, Allen. 2013. *Saving normal: As insider's revolt against out-of-control psychiatric diagnosis, DSM-5, Big Pharma, and the medicalization of ordinary life*. New York: William Morrow-Harper Collins.
3. Ballard, Karen, and Mary Ann Elston. 2005. Medicalization: A multi-dimensional concept. *Social Theory and Health* 3: 228–241.
4. Conrad, Peter, and Joseph W. Schneider. 1992. *Deviance and medicalization: From badness to sickness*. Exp ed. Philadelphia: Temple University Press.
5. Kleinman, Arthur. 1995. *Writing at the margin: Discourse between anthropology and medicine*. Berkeley: University of California Press.
6. Downing, Raymond. 2011. *Biohealth: Beyond medicalization: Imposing health*. Eugene: Pickwick Publications.
7. Conrad, Peter. 2005. The shifting engines of medicalization. *Journal of Health and Social Behavior* 46 (1): 3–14.
8. Clarke, Adele E., Laura Mamo, Jennifer Ruth Fosket, Jennifer R. Fishman, and Janet K. Shim (eds.). 2010. *Biomedicalization: Technoscience, health and illness in the U.S*. Durham: Duke University Press.
9. Verweij, Marcel. 1999. Medicalization as a moral problem for preventive medicine. *Bioethics* 13 (2): 89–113.
10. Abraham, John. 2010. Pharmaceuticalization of society in context: Theoretical, empirical and health dimensions. *Sociology* 44 (4): 603–622.
11. Davis, Joseph E. 2010. Medicalization, social control, and the relief of suffering. In *The new Blackwell companion to medical sociology*, ed. William C. Cockerham, 211–241. West Sussex: Blackwell Publishing Ltd.
12. Foucault, Michel. 2003. *The birth of the clinic: An archaeology of medical perception*. Trans. Alan M. Sheridan. London: Routledge.
13. Horwitz, Allan V., and Jerome C. Wakefield. 2007. *The loss of sadness: How psychiatry transformed normal sorrow into depressive disorder*. New York: Oxford University Press.

14. Illich, Ivan. 1976. *Limits to medicine: Medical nemesis: The expropriation of health*. London: Marion Boyars.
15. Moynihan, Ray, and David Henry. 2006. The fight against disease mongering: Generating knowledge for action. *PloS Medicine* 3 (4): 0425–0428.
16. Rose, Nikolas. 2006. Disorders without borders? The expanding scope of psychiatric practice. *BioSocieties* 1: 465–484.
17. Szasz, Thomas. 1970. *Manufacture of madness*. New York: Dell.
18. Zola, Irving K. 1972. Medicine as an institution of social control. *Sociological Review* 20: 487–504.
19. Fassin, Didier. 2011. This is not medicalization. In *Drugs and culture: Knowledge, consumption and policy*, ed. Geoffrey Hunt, Maitena Milhet, and Henri Bergeron, 85–93. Farnham: Ashgate Publishing.
20. Parens, Erik. 2013. On good and bad forms of medicalization. *Bioethics* 27 (1): 28–35.
21. Rose, Nikolas. 2007. Beyond medicalisation. *Lancet* 369: 700–701.
22. Rose, Nikolas. 2007. *The politics of life itself: Biomedicine, power, and subjectivity in the twenty-first century*. Princeton: Princeton University Press.
23. Engelhardt, H.Tristram. 1986. *The foundations of bioethics*. New York: Oxford University Press.
24. Sadler, John Z., Fabrice Jotterand, Simon Craddock Lee, and Stephen Inrig. 2009. Can medicalization be good? Situating medicalization within bioethics. *Theoretical Medicine and Bioethics* 30: 411–425.
25. Haslam, Nick. 2005. Dimensions of folk psychiatry. *Review of General Psychology* 9 (1): 35–47.
26. Baer, Hans A., Merrill Singer, and Ida Susser. 2013. *Medical anthropology and the world system: Critical perspectives.* 3rd ed. Santa Barbara: Praeger.
27. Press, Nancy. 2006. Social construction and medicalization: Behavioral genetics in context. In *Wrestling with behavioral genetics: Science, ethics, and public conversation*, ed. Erik Perens, Audrey R. Chapman, and Nancy Press, 131–149. Baltimore: Johns Hopkins University Press.
28. Vilhelmsson, Andreas, Tommy Svensson, and Anna Meeuwisse. 2011. Mental ill health, public health and medicalization. *Public Health Ethics* 4 (3): 207–217.
29. Mangosing, Daryl. 2015. The medicalization of human conditions and health care: A public health perspective. *TuftScope* 14 (2): 19–20.
30. González-Moreno, María, Cristian Saborido, and David Teira. 2015. Disease-mongering through clinical trials. *Studies in History and Philosophy of Biological and Biomedical Sciences* 51: 11–18.
31. Shostak, Sara. 2010. Marking populations and persons at risk: Molecular epidemiology and environmental health. In *Biomedicalization: Technoscience, health and illness in the U.S.*, ed. Adele E. Clarke et al., 242–262. Durham: Duke University Press.
32. Amundson, Ron. 2000. Against normal function. *Studies in History and Philosophy of Biological and Biomedical Sciences* 31 (1): 33–53.
33. Oliver, Michael. 1996. *Understanding disability: From theory to practice*. Basingstoke: Macmillan.
34. Rose, Nikolas. 1994. Medicine, history, and the present. In *Reassessing Foucault: Power, medicine, and the body*, ed. Colin Jones and Roy Porter, 48–72. London: Routledge.
35. Conrad, Peter. 1992. Medicalization and social control. *Annual Review of Sociology* 18: 209–232.
36. Dubos, René. 1959. *The mirage of health: Utopias, progress, and biological change*. New Brunswick: Rutgers University Press.
37. Porter, Roy. 2002. *Blood and guts: A short history of medicine*. New York: W.W. Norton & Company.
38. Foucault, Michel. 2003. The birth of social medicine. In *The essential Foucault*, ed. Paul Rabinow and Nikolas Rose, 319–337. New York: The New Press.
39. Porter, Dorothy. 2006. How did social medicine evolve, and where is it heading? *PLoS Medicine* 3 (10): 1667–1672.
40. Costa-Neto, Eraldo Medeiros. 2012. Zoopharmacognosy, the self-medication behavior of animals. *Interfaces Científicas—Saúde e Ambiente* 1 (1): 61–72.
41. Fábrega, Horacio. 1997. *Evolution of sickness and healing*. Berkeley: University of California Press.
42. Canguilhem, Georges. 2012. *Writings on medicine*. Trans. Stefanos Geroulanos and Todd Meyers. New York: Fordham University Press.
43. Audulv, Åsa. 2013. The over time development of chronic illness self-management patterns: A longitudinal qualitative study. *BMC Public Health* 13: 1–15.
44. Fainzang, Sylvie. 2013. The other side of medicalization: Self-medicalization and self-medication. *Culture, Medicine and Psychiatry* 37: 488–504.

45. Canguilhem, Georges. 1991. *The normal and the pathological*. Trans. Carolyn R. Fawcett and Robert S. Cohen. New York: Zone Books.
46. Parsons, Talcott. 1951. *The social system*. New York: The Free Press.
47. Broom, Dorothy H., and Roslyn V. Woodward. 1996. Medicalization reconsidered: Towards a collaborative approach to care. *Sociology of Health & Illness* 18: 357–378.
48. Haslam, Nick, and Erlend P. Kvaale. 2015. Biogenetic explanations of mental disorder: The mixed-blessings model. *Current Directions in Psychological Science* 24 (5): 399–404.
49. Hurt, Ryan T., Jithinraj Edakkanambeth Varayil, Manpreet S. Mundi, Robert G. Martindale, and Jon O. Ebbert. 2014. Designation of obesity as a disease: Lessons learned from alcohol and tobacco. *Current Gastroenterology Reports* 16(11): 1–7.
50. Riska, Elianne. 2010. Gender and medicalization and biomedicalization theories. In *Biomedicalization: Technoscience, health and illness in the U.S.*, ed. Adele E. Clarke et al., 147–170. Durham: Duke University Press.
51. Oosterhuis, Harry. 2000. *Stepchildren of nature: Krafft-Ebing, psychiatry, and the making of sexual identity*. Chicago: The University of Chicago Press.
52. Kiss, Jemima. 2015. What if a bionic leg is so good that someone chooses to amputate? *The Guardian*, April 9. http://www.theguardian.com/technology/2015/apr/09/disability-amputees-bionics-hugh-herr-super-prostheses. Accessed 7 Dec 2015.
53. Devisch, Ignaas, and Ine Van Hoyweghen. 2011. A new era of medical consumption: Medicalisation revisited. *Aporia* 3 (3): 16–21.
54. Purdy, Laura. 2001. Medicalization, medical necessity, and feminist medicine. *Bioethics* 15 (3): 248–261.
55. Savulescu, Julian, and Nick Bostrom (eds.). 2009. *Human enhancement*. Oxford: Oxford University Press.
56. Tutton, Richard. 2012. Personalizing medicine: Futures present and past. *Social Science and Medicine* 75 (10): 1721–1728.
57. Bland, Jeffrey S. 2015. *The disease delusion: Conquering the cause of chronic illness for a healthier, longer, and happier life*. New York: HarperWave.
58. Egger, Garry J., Andrew F. Binns, and Stephan R. Rossner. 2008. The emergence of "lifestyle medicine" as a structured approach for management of chronic disease. *Medical Journal of Australia* 190 (3): 143–145.
59. Lock, Margaret. 2004. Medicalization and the naturalization of social control. In *Encyclopedia of medical anthropology*, vol. 1, ed. Carol R. Ember and Melvin Ember, 116–124. New York: Springer.
60. Marmot, Michael. 2005. Social determinants of health inequalities. *Lancet* 365: 1099–1104.