Technological Paternalism: On how medicine has reformed ethics and how technology can refine moral theory

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ABSTRACT: *The objective of this article is to investigate ethical aspects of technology through the moral term "paternalism". The field of investigation is medicine. The reason for this is twofold. Firstly, "paternalism" has gained moral relevance through modern medicine, where physicians have been accused of behaving paternalistic and threatening patients' autonomy. Secondly, medicine is a brilliant area to scrutinise the evaluative aspects of technology. It is argued that paternalism is a morally relevant term for the ethics of technology, but that its traditional conception is not adequate to address the challenges of modern technology. A modification towards a "technological paternalism" is necessary. That is, "technological paternalism" is a fruitful term in the ethics of technology. Moreover, it is suited to point out the deficiencies of the traditional concept of paternalism and to reform and vitalise the conception of paternalism in ethics in order to handle the challenges of technology*.

Introduction

Medical practitioners have frequently been accused of being paternalistic, overriding the interests and autonomy of the patient.[1] In the same manner engineers, scientists and experts can be accused of paternalism as technology and technological solutions are implemented without respect for the autonomy of individuals. Is this so – is there a "technological paternalism"? If it is so, what are the practical and theoretical (ethical) implications?

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This is the main issue of this article, and it will be addressed within the context of medicine. One of the reasons for this is that modern medicine wholeheartedly has embraced technology. More than that, modern medicine is constituted by technology.[2] Furthermore, technology has enhanced the criticism of paternalism in modern medicine.

However, there are some theoretical aspects, which make medicine particularly suited to study the ethical aspects of technology. Medicine has done more than providing ethics with refreshing and challenging cases. According to Stephen Toulmin, medicine has "saved the life of ethics."[3] Hence, medicine is a central stage for the application of ethics and for its vitalisation, development and refinement. Furthermore, medicine is a brilliant area to study the social and ethical aspects of technology. The evaluative aspects of technology appear to come particularly clear in a constitutively value-laden activity as medicine, where all activity is directed towards helping individual patients.

Hence, medicine appears to be especially suited to study the ethics of technology. In particular, it is suited to analyse the concept of paternalism. Paternalism appears to be a fruitful concept to point out and increase our awareness of actions reducing a person's autonomy. However, the widespread use of technology challenges the traditional conception of paternalism, and introduces what might be called "technological paternalism". My aim is to investigate the fruitfulness of the term "technological paternalism" to the ethics of technology and to point out how it can reform and vitalise ethics in general.

Paternalism in medicine and the emergence of technological paternalism

One of the most forceful critiques against medicine in modern times has been that it is a paternalistic enterprise. During the 1970s and 1980s there was a strong tendency in bioethics to reject paternalism as an unjustified tampering with autonomy. At the end of the 1980s, however, the views were more balanced. It was recognised that paternalism had both positive and negative connotations and that some sort of paternalism was unavoidable and justifiable in a modern health care.

At the end of the 20th century, however, a new and interesting critique of paternalism emerged. It was claimed that the mechanistic model of man and the widespread application of technology of modern health care reduce patient's autonomy, and thus promote paternalism. According to a biological-statistical approach in medicine the decision of disease can be made without asking the patient. The physician can analyse the condition and determine the proper measures independent of the patient's experience.[4] As technology has become so powerful and complicated and physicians are the only ones who master it, their power has become extensive.[5] Furthermore, technical specialisation militates against the respect for patients' autonomy.[6] Others again argue that technology enforces certain values, and as such is paternalistic.[7]

The claim that a mechanistic model of man and a corresponding technological dominance is correlated to paternalism is supported by empirical studies showing that medical specialists in technologically dominant fields, such as laboratory specialities (radiology, pathology, and clinical chemistry), internal medicine specialities and surgical specialities, have more paternalistic attitudes than physicians in general practice, social medicine and psychiatry.[8] Hence, what might be called a "technological paternalism" appears to be a prevalent problem in modern medicine.

The objective of this article is threefold: to scrutinise the phenomena behind this term, to investigate whether they actually are paternalistic, and to see how this kind of "paternalism" is relevant for the ethics of technology. I will do this by presenting four interpretations of technological paternalism and compare them with four traditional conceptions of paternalism. I argue that what in sum might be called the technological conception of medicine bursts the traditional account of paternalism and demands new perspectives on paternalism.

Technological paternalism

The technological paternalism in medicine can be conceived of in at least four ways.

First, within the framework of modern technological medicine it can be argued that knowledge has become ever more complex and that it is impossible for a normal patient to be able to understand the scope of its possibilities, outcomes and risks, and that these issues have to be dealt with by experts. That is, the reduced comprehensibility prevents persons from acting autonomously, and they should therefore be protected by professionals.

Second, it is argued that technology gives an objective and scientific conception of man. Technology's so called objectivity frees significant issues of medicine from human's subjective experience, and as such, it can be conceived of as paternalistic. The physician decides what is best for the patient on behalf of objective test results or x-ray findings. One author who has illustrated this kind of technological paternalism is Stanley Joel Reiser in his brilliant book *Technology and the reign of medicine*.[9] Reiser points out that tools and devices have standardised physical examination and that technological tests have provided general measures of disease. In this, medicine has shifted its attention from the subjective narration of the particular patient to objective measure of technology. Modern medicine does not only avoid the subjectivity of the patient, but also the subjectivity of the physician. According to Reiser, tests have become increasingly independent of the particular physician's interpretation. Hence, technology has enabled, if not constituted, medicine's scientific status. The point is that this technological objectivity is gained at the expense of the importance of and respect for the perspective of the particular patient. This ignorance the patient's subjective experience is conceived of as a paternalistic characteristic of modern medicine. Technology has freed medicine from the patient as a person, and this has the adverse effect that it tends to reduce the autonomy of the patient as well.

Whereas the second conception of a "technological paternalism" rests on technology's contribution to medicine's "objectivity", the third is based on

technology's expansion of medical "sensitivity". Technology has made medicine reveal conditions that the particular patient in question is not aware of, but that can or will eventually lead to illness. Through technological tests, in particular screening and predictive testing, one can detect early stages of disease, foresee certain diseases, identify risk factors and estimate risks. In the claim that "we have tested you, and found something alerting, which might be dangerous" there is a conception that "we know something important about you" and "we know what is best for you" as well, but also, and more profoundly, "our knowledge might harm you and we therefore have to decide what you should know".

A fourth account of technological paternalism is found in the argument that medical technology is applied beyond the interest of and without any outcome for the patient. Technological medicine has been criticised for being futile and detrimental.[10] It is argued that technology is applied "too soon and too much"[11] and inappropriately.[12] This creates "pseudodisease", conditions that, if left alone, would never have come to the person's awareness.[13] There appears to be something that makes us apply technology beyond the interest of the patient and which can be conceived of as in paternalistic terms.

Hence the conception of technological paternalism rests on four arguments. First, that medical knowledge is incomprehensible to the patient; second, that it is detached from the subjective experience of the individual patient; third, that medical knowledge is acquired without the initiative of the individual person and that it can be harmful and thus has to be "handled with care" and governance; and, fourth, that medical knowledge is applied beyond the interest of the patient.

How then does this fourfold conception of technological paternalism relate to traditional paternalism? Let me shortly investigate a traditional conception before I analyse how they relate.

Traditional paternalism

A formal definition of traditional paternalism is given by Dworkin:[14]

P acts paternalistically towards *Q* if and only if

(a) *P* acts with the intent of averting some harm or promoting some benefit for *Q*.
(b) *P* acts contrary to the current preferences, desires or dispositions of *Q*.
(c) *P*'s act is a limitation on *Q*'s autonomy.

As Dworkin points out, this definition is evaluatively neutral as it does not beg any questions with respect to the action's legitimacy, but clauses (b) and (c) raise normative questions.

A less formal version of the same definition is given by Beauchamp:[15] "Paternalism is the intentional limitation of the autonomy of one person by another, where the person who limits autonomy justifies the action exclusively by the goal of helping the person whose autonomy is limited".

Four types of paternalism

The term paternalism stems from the Latin word *pater*, meaning father, and often refers to an attitude of fatherly caring, guarding or government. Although Immanuel Kant discussed and denounced a paternalistic government, *imperion paternale*,[16] the term has become prevalent through John Stuart Mill's attack on paternalism in *On Liberty*.[17] He argued that avoiding paternalism and protecting liberty produced the best possible conditions for social progress and for the development of individual character and talent. The position descending from Mill has been called "anti-paternalism".[15] Mill acknowledged social control over individual liberty on one condition though: "The only purpose for which power can be rightfully exercised over any member of a civilized community against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant."[17]

A first step towards allowing benevolent social control over individuals is where a caring action does not initially constitute violations of the recipient's autonomy. One example is health education and warning labels on potentially dangerous products. This stance has also been called "soft paternalism".[18] Some would argue that there is no essential moral difference between anti-paternalism and soft paternalism.

Anti-paternalism	Soft Paternalism	Hard Paternalism	
		Weak Paternalism	Strong Paternalism
No restrictions of an agent's actions except actions that harm others	Social control where a caring action does not violate the recipient's autonomy	Intervening in conditions that compromise a persons ability to act autonomously	To protect or benefit a person by limiting the person's autonomy even if the person's contrary choices are autonomous.

Table 1: Different types of paternalism

A further step in intervening in individuals' autonomy is what has been denoted "weak paternalism", according to which one "has the right to prevent self-regarding harmful conduct only when it is substantially nonvoluntary or when temporary intervention is necessary to establish whether it is voluntary or not".[19] According to weak paternalism one might intervene in conditions that compromise a person's ability to act autonomously. Häyry mentions four kinds of weak paternalism.[20] First, weak paternalism can apply to special categories of persons, such as children, senile, persons with mental defects. Second, it can apply to persons that lack control, such as patients whose illness affects their decision-making capacity or when injured persons in shock refuse medical assistance. Third, it applies to persons that lack knowledge, and fourth, to persons that are under undue influence, such as coercion, economic pressure or customs and traditions.

In other words, weak paternalism interferes with individual's actions when, and only when, the individuals would otherwise harm themselves and their decisions are

impaired. Hence, although weak paternalism appears to violate the recipient's autonomy, in the last end, it does not. Therefore one can argue that even weak paternalism is not a morally relevant paternalism.[20, 21]

The last type of paternalism does explicitly limit a person's autonomy, and has therefore been called "strong paternalism". One example would be refusing to release a severely sick hospital patient who insists on going home although he is competent and aware of the consequences (death). Another example would be to prevent a competent patient from receiving medical information that might lead to suicide. Hence, according to strong paternalism it is proper to protect or benefit a person by limiting the person's autonomy even if the person's contrary choices are autonomous.[15] In other words one ought to control what is conceived of as self-destructive, immoral or irrational behaviour even if the decisions leading to these are not impaired.[20] Thus it is only this last (strong) type of paternalism that is morally relevant.

Technological paternalism versus traditional paternalism

If the mechanistic model of man and the corresponding technological approach in medicine is applied in order to intentionally help a person by limiting the person's autonomy, then technological paternalism corresponds well with the traditional conception of paternalism. Technology then becomes a means for paternalism of a traditional type. This, however, is a trivial conception of technological paternalism, and has not been the objective of this article. The four types of technological paternalism described earlier are of a different kind.

The first kind of technological paternalism conceived medical knowledge as so comprehensive and complex that it is incomprehensible to the ordinary patient. This reduced comprehensibility prevents persons from acting autonomously, which is why they should be therefore taken care of. This satisfies the criteria (a) to (c) in Dworkin's definition and corresponds well to what traditionally has been called "weak paternalism". However, the claim that otherwise autonomous adults have reduced autonomy with respect to health care due to the incomprehensibility of medical knowledge, is a rather strong claim, which is widely contested. Many critiques would argue that the technological approach in medicine has enhanced human autonomy; it has extended our choice.

The second type of technological paternalism is due to the ignorance of the perspective of the patient. Technology provides the objective knowledge, and patients' subjective experience only confounds medical knowledge. Although one might argue that this kind of "paternalism" satisfies all criteria of the definition, it does not fit into the traditional conception of paternalism as discussed above. This "paternalism" is not a result of the patient's lack of knowledge, of a special category of persons, of lack of control or due to undue influence (weak paternalism). Neither does it try to protect or benefit autonomous persons against their will (strong paternalism). Due to an epistemic shift (from the narrative of the patient to the technological test result) modern medicine challenges the moral basis of medicine: the duty to help the person who is weak and in

pain. This can be conceived of as paternalistic, but not in the traditional meaning of the term.

The third kind of technological paternalism is due to knowledge that is potentially harmful, and that is gained independent of the patient's awareness of any illness, e.g. knowledge gained by predictive testing. In this case it is not only a question of the perspective of medical knowledge shifting from a "subjective" to an "objective" account, but also an issue of who initiates the acquisition of knowledge. In the second kind of technological paternalism the patient's perspective was still relevant in initiating the contact with health care. The patient went to his doctor because he felt ill. In the third kind of technological paternalism, the physician contacts the person and makes him a patient through technological tests.

This eliminates the patient's perspective even more from the medical approach. In such situations the physician acts paternalistic because she acts with the intent of averting some harm (disease) or promoting some benefit (health) (a), and to a certain extent limits the person's autonomy (c) and acts against his current preferences (b). One example of this could be where a physician, due to his concern for his patient's health, orders a predictive test, which turns out to be positive. However, due to the narrow medical perspective the physician fails to notice the social consequences of this, e.g. that the patient's health insurance become extremely expensive.[a] Hence, the limited perspective of medical actions can lead to a kind of paternalism, which is not well covered by the traditional conception of paternalism. It is not defects or limitations of a person, but rather the pervasive medical perspective that has paternalistic implications.

The fourth kind of technological paternalism is recognised in the excessive application of technology in health care. There appears to be some kind of a collective imperative, being contrary to individual's preferences and reducing their autonomy. This concurs partly with Dworkin's definition in (b) and (c), but not with (a), as the acts are not intentional (at least not in the ordinary way). Patient's autonomy does not appear to be intentionally limited with the goal of helping or harming them. Hence, this last kind of "technological paternalism" is not paternalism in the strict formal sense, and it cannot be addressed within the framework of traditional paternalism. However, there are some paternalistic traits, as some authors have tried to identify the intentionality of technology in metaphors, such as "autonomous technology"[22,23] and "the Sorcerer's Broom".[24] It appears as though technology intentionally is limiting our autonomy.

New paternalism

Hence, in modern medicine we encounter situations that concur with the definition of paternalism, but which do not fit with the traditional typology. There can be at least two responses to this. On the one hand, we could claim that what has been denoted "technological paternalism" is not paternalism at all. The term refers to phenomena of

a. This example I owe to Professor Søren Holm.

societal and moral relevance that are better dealt with within other frameworks, e.g. as "technological imperative"[5] as "power-knowledge" (Foucault), as strategic actions (Habermas) or as "epistemic compulsion".

On the other hand, "technological paternalism" might revise and renew moral theory in order to cover new and important phenomena introduced by technology. The conception of paternalism comprises a positive notion of caring control as well as an alert against abuse that is overlooked in frameworks, such as "technological imperative" and "power-knowledge". However, the modern mechanistic conception of man and health care's extensive application of technology challenges standard moral terminology. In particular it indicates that the traditional framework of paternalism needs revision.

Thus the conception of technological paternalism points to some weaknesses in the traditional conceptions of paternalism and indicates some areas of expansion. First, it illustrates that a person's autonomy is not only limited by the intentional actions of other agents. Limited autonomy might be due to overall social and epistemic structures. This is particularly clear with technology in medicine. Hence, a perspective that includes social and conceptual constraints should be added to the perspective of personal autonomy and individual liberty.[b]

Second, the conception of technological paternalism illustrates how premises of paternalism are altered. In the first account there is a difference in knowledge between the physician and patient resulting in paternalism. Although this epistemic difference is substantially enhanced by a technological approach in medicine, it is not dramatically new. Medical activity is based on a difference in knowledge: we go to the doctor because she knows something we do not. That power is connected to knowledge is not a new insight. The important difference is rather the shift in perspective. What constitutes medical knowledge is altered, reducing the perspective of the patient.

Third, the issues addressed as "technological paternalism" represent not only an epistemic, but also an action-theoretic shift. It focuses on systemic, and not only individual, aspects of human action. In particular the conception of technological paternalism directs the focus of attention towards responsibility on an overall level. In other words, we should not only discuss our personal preferences and individual autonomy, but also the evaluative relevance of our theoretical conceptions, our artefacts and our social structures. This overall responsibility appears to lack in other frameworks, such as theories of "power-knowledge" and "technological imperative", but appears to be important in complex organisations such as modern health care. Thus,

b. One might argue that with respect to such "epistemic compulsion" technological paternalism could be brought to fit a weak paternalism. A certain conceptual framework can be conceived of as a less than optimal circumstance, which reduces our abilities to voluntary decision-making. This "conceptual pressure" corresponds to what is conceived of as "undue influence". This, however, breaks with a basic premise of weak paternalism, that is, that individuals would harm themselves if paternalistic acts were not performed. It is only when a person otherwise would harm himself due to influence, such as coercion, economic pressure or customs and tradition, that an other agent legitimately intervene (see Häyry 1998).[20 (p.454)]

the paternalistic perspective may highlight responsibility on a super-personal level in a way that other frameworks lack.

Thus, traditionally paternalism is defined with reference to reduced autonomy of individuals due to actions of intentional agents. Today, however, paternalism has gained a connotation that reaches beyond the context of individual's actions or interrelationships between actors, and to overall considerations. This is recognised in health care in particular due to its mechanistic model of man and its prevailing technological approach.

Conclusion

Altogether, there appears to be an unavoidable asymmetry in the physician-patient relationship, an asymmetry with both epistemic and moral aspects. The physician is supposed to know something which is of value for the patient. Besides there is a moral obligation towards helping a suffering person that seeks health care for help. This asymmetry leaves room for a zone between use and misuse of medical knowledge that is normatively highly challenging, and which can be discussed in terms of paternalism. To a large extent this is highly relevant to engineers and scientists as well.

What this article shows is that modern technological medicine influences the asymmetry itself, and that a traditional conception of paternalism is insufficient to address this complex field. However, "technological paternalism" appears to cover some of the important and interesting aspects left out by traditional approaches.

That is, medicine has vitalised the moral term paternalism. Furthermore the application of technology in medicine has highlighted some deficiencies of the traditional conception of paternalism. These deficiencies can be relieved by the conception of "technological paternalism". "Technological paternalism" expands the traditional conception of paternalism beyond intentional reduction of individual autonomy to also include altered autonomy due to epistemological and societal frameworks (such as technology). We are not only responsible for technology in terms of individual intentional acts with devices, but also in terms of its methods, organisations and epistemic structures, such as beliefs and myths.[25]

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