

Aristotle, Hume and the goals of medicine

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Abstract

Rationale, aims and objectives While medicine is now an immense global industry, clinicians often appear unclear as to its goals. This paper seeks to clarify proper goals for healthcare.

Methods This paper uses two philosophical steps to clarify our conceptualization of health and thus our goals for health care. Firstly, clinicians need to understand the significance of Hume's fact/value distinction in medicine, for medicine relies on both facts and values. Secondly clinicians need a better specified definition 'health' to use as a goal for health care.

Results Aristotle's model of human flourishing is used as the starting point for a new conceptualization of health.

Conclusions Health care should aim for the state of least possible illness or disability, or of maximal functional adaptation to illness or disability.

Introduction

According to Aristotle, 'the goal of the medical art is health' [1]. However, Aristotle left us with a problem – he did not tell us what health was. Although Western societies are prepared to spend dizzying sums on health care, there is no universally agreed definition of health. There are a number of possible views that compete for our allegiance. I take it that the purpose of health care is to maximize health. If medicine could agree what health was, then health care could have a clear goal.

So, can we identify a coherent philosophy of health? An initial step would be to construct an ontology of health. What kinds of facts or constructs make sense in health and illness? As well as defining health itself, we currently have a number of subsequent ontological puzzles, such as:

- What constitutes a disease? For example, is pathology defined by structural or physiological departure from a norm or by loss of function?
- Can we view people with a disease as simultaneously healthy?
- Should we conceptualize or manage risk factors as diseases?

Such questions tend to get us bogged down very quickly. This is often due to poorly defined medical ontology. A key feature is a failure to recognize and deal with the 'fact/value distinction' in medicine.

Modern medicine has become more and more about fixing things that 'go wrong' in our bodies, and fixing the risk of things

going wrong. But what counts as 'going wrong?' We must ask what things should be fixed, and what seen as normal. Such questions can only make sense when seen in their cultural setting. We cannot extricate the things we do as doctors from the lives of the people we do them to. Both patients and clinicians are part of a changing world. We must therefore ask who should be giving the answers. How can we as doctors, as experts, negotiate with autonomous patients about aims and motives in medicine?

This paper examines the goals of health care, firstly, by tackling the problem of the fact value distinction in medicine. The paper then examines concepts of both health and ill health. The paper then goes on to describe how a normative neo-Aristotelian definition of health may help us to set appropriate goals for health care.

The fact/value distinction

Broadly speaking, treating values as if they were the same kind of things as facts is to make a category error. Hume gives the classic account of the fact value distinction in his analysis of moral values: 'Take any action allowed to be vicious; wilful murder, for instance. Examine it in all lights and see if you can find that matter of fact . . . which you call vice. In whichever way you take it, you only find certain passions, motives, volitions and thoughts . . . The vice entirely escapes you, as long as you consider the object. You can never find it till you turn your reflection into your own breast, and

find a sentiment of disapprobation, which arises in you, towards that action' [2]. In other words, as McNaughton says, 'values are not determined by the way the world is, because value is not to be found in the world' [3].

While Hume's argument is sound up to a point, Putnam argues that we must not overstate the case [4]. Facts and values may not always be distinct. Consider the claim 'X is cruel'. Are we stating what we take to be a fact, or are we making a value judgement? Or are we, as RM Hare suggests, smuggling in a value judgement disguised as a fact? Putnam argues that it is reasonable to talk about a fact/value distinction, but not a fact/value dichotomy. Having accepted Putnam's reservation however, values cannot normally be derived from the material facts of the world. If we accept this classic Humean distinction are values just preferences or could we have a realist theory of values? Can I know if there is a right action or a right goal for an activity? To use Russell's phrase, are values part of the 'furniture of the world' [5]?

Much of the current confusion regarding medical goals is because, in a pluralistic society, we have become scared of being clear about our values and have sought to retreat into facts. But a medicine based upon facts alone will not work. Take an elementary example. If a patient presents with community-acquired pneumonia, I may treat him with amoxicillin. In doing this, I am seeking to kill many millions of *Streptococcus pneumoniae* bacilli that were simply going about their everyday business. I do this without a second thought because I value the life of my patient more highly than the life of millions of bacilli. There is nothing in the physical world that tells me which to value the most, and the Strep do not even get a vote! I thus manage the world according to the values that I bring into it.

To treat pneumonia is a normal part of our medical practice and culture. Medical practice and culture is infused throughout with values as well as facts. Most medical decisions involve the introductions of values in order to rightly manage facts, even if this is usually not quite so obvious. Clinicians expect to update factual knowledge constantly. In a world of changing and increasingly complex choices, we need to review and perhaps update our values also.

Aristotle points to the need for values as well as empirically supported methods. As he says: 'virtue makes us aim at the right mark, and practical wisdom makes us take the right means' [6]. The rest of this paper is based on a consideration of how values might influence our use of facts in medicine.

Sickness and health

Categories of ill health are much easier to define than health itself. In mapping the spaces of health and sickness, therefore, first let us note three key terms used in ill-health [7]:

1 Disease is defined by pathology, and is usually established by reference to measurable facts. However, this simple definition has recently become extended by 'surveillance medicine', which 'involves a fundamental remapping of the spaces of illness. This includes the problematization of normality, the redrawing of the relationship between symptom, sign and illness, and the localization of illness outside the corporal space of the body' [8]

2 Illness is the patient's ill-health experience, and has a large individual subjective element greatly influenced by psychological and social factors. It is experienced within a life narrative, not as a scientific construct. Its relationship to disease is variable.

3 Disability results from impairment of function. It has a significant subjective element, and is partially socially determined.

It will be useful to keep these definitions in mind. But consider the near universal prevalence of minor illness symptoms and the increasing reach of surveillance medicine. Clifton Meador, in a classic satirical article in the *New England Journal of Medicine*, pictures the discovery of the last well person [9]. Meador comments 'If the behaviour of doctors and the public continues unabated, eventually every well person will be labeled sick . . . We will all be assigned to one diagnosis related group or another . . .' So, it seems unlikely that we can define 'health' as simply being whatever is outside the territory of disease, illness and disability.

So what is health?

The World Health Organization (WHO) gave an iconic definition of health. They declare that 'Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' [10]. But this utopian vision is an unattainable ideal, bearing no relation to the struggles of real people in an imperfect world. The WHO definition however extends rather than subverts the aim of the biomedical model. If we are closed knowable systems, then imperfections should be fixed. Logically, as none of us is in this complete state of well-being, we are all in need of medical intervention to correct 'abnormalities' that obstruct our path to perfection. But should we view any deviation whatever from perfection as pathology needing treatment? Foucault points out that the reference point of bedside medicine is 'health', whereas the reference point of hospital medicine is 'normality' [11]. Might these reference points differ?

A biomedical approach to health is to see it in reference to a normal state. Two legs good, one leg bad. Certainly, I have no great desire to lose any limbs, but if I did, could I not be healthy afterwards? Health as the attainment of biomedical norms is nonetheless becoming our dominant definition by default. It is the only definition that makes sense within a biomedical model, and we are seeing our profession driven increasingly down a razor sharp but razor narrow biomedical road. A norm-referenced definition of health also ignores the differences between disease, illness and disability.

The WHO definition should also alert us to another paradox. The WHO definition seems dated. Its faith in an attainable Nirvana is touching, but not credible. It is a flagrantly modernistic statement, and, like a statue of Lenin, it appears now as the ironic icon of a bygone age. Huber *et al.* have condemned the WHO definition as no longer fit for purpose [12]. Health cannot simply be defined as the absence of perfection. But our definition of health will be linked to the thinking of our time, and it will have a sell by date.

The problem of the 'normal' state has been discussed by many writers, but perhaps the clearest conceptualization would be to consider Boorse's argument, and the polarity of models that he offers. Boorse claims that conceptualizations of disease are broadly either normative or naturalistic in their form [13] (note he uses normative in its philosophical sense – relating to an 'ought',

not merely to statistical norms). A normative model of disease claims that the organism in some sense (usually some biological or evolutionary sense) should function within parameters that we can specify. There is thus a standard model of organism X against which we can measure possible variant organisms. A normative model therefore values certain functional states above others.

A naturalistic model of disease recognizes no such proper types. A naturalistic model would observe that the particular characteristics of certain actual organisms will confer a reproductive or evolutionary advantage within certain observed environments. Thus, as Hamilton points out, a male largemouth bass producing eggs in a particular atypical environment cannot be considered abnormal by this account [14]. Boorse defends a naturalistic account of disease.

So where does Boorse's argument get us for a philosophy of health? Boorse claims that we can define a naturalistic, thus value-free, concept of health. When pushed Boorse seems to retreat to the biomedical view that health is simply the absence of disease [15]. However, his preferred specification of a value-free concept of health is more nuanced than this. He conceptualizes a biostatistical model (BST) of health that has four elements [13]:

- 1 A reference class, for example, species X.
- 2 A statistically typical set of usual functions observed within species X.
- 3 The ability of a specific organism Y belonging to species X to function within the parameters defined by element 2.
- 4 A disease exists where a specific organism Z displays a functional ability below this level.

However, evaluative terms such as 'below' fatally flaw the naturalistic project. 'Below' in this context assumes normativity, a comparison with an intended function, as opposed to a value-neutral observation of a particular organism in a particular environment. Thus, a 'normal' 30-year-old man may be able to run 100 m within a certain usual, normally distributed, time range. Both a 30-year-old Olympic athlete and a 30-year-old with a fractured foot will presumably be outside this usual time range, one faster and one slower. We can only determine that one is non-pathological by appealing to some sense of 'best' function rather than 'normal' function if we are using 'normal' solely in a statistical sense. We can adjust the 'normal' range to include the athlete, but our failure also to adjust for the person with a fracture demonstrates that we cannot abandon evaluative notions such as excellence or failure within our definition of normal locomotion – we are not simply describing performance that lies within the centre of a normal distribution curve. Yet, Boorse's definition cannot cut out this evaluative step if it is to remain a meaningful model.

Hamilton therefore argues that Boorse's naturalistic conceptualization of disease may be of use to theoreticians (he gives the example of pathologists, although I am unsure what actual pathologists would make of his comments), but of little value to clinicians. Hamilton's implication is that it would be hard for clinicians' practice to be value-free [14].

So if health is not just the absence of something, can we construct a more positive concept? Can we go beyond norm-referenced facts and admit values into our concept of health? If health relates to human function and dysfunction, then how could we reference it to a notion of optimum human functioning? 'Optimum' is of course a value-denoting term. This move therefore

commits us to some form of normative model of health. Such a move would necessitate linking the concept of health to some model of human givens, or even human nature. Arguably the best starting point for such a discussion would still be the work of Aristotle. Aristotle talked about *eudaemonia* or the good life [16]. *Eudaemonia* means a good life in the sense of happiness derived from human flourishing. For Aristotle, all human activity aims at some goods, but some goods are more important than others. Aristotle saw the highest human good as more than pleasure, fame or materialism, but rather as a life lived by reason and excellence of character.

A notion of human flourishing has much to commend it as a basis for a model of human health. In our more democratically pluralistic and possibly less high-minded society today, some might disagree with Aristotle's conception of the good life. However, in the mid 20th century, Maslow developed a comparable but broader idea of human flourishing within the psychology literature. Maslow proposed that humans have a hierarchy of needs [17]. He described five levels of human need, aiming for a mature human autonomy:

Level 1: Physical survival needs, for example, for air, water, food, sleep, warmth, basic health, exercise, sex.

Level 2: Safety and security needs, for example, for physical safety, economic security, freedom from threats, comfort, peace.

Level 3: Social needs, for example, for belonging, acceptance, group or team membership, love and affection.

Level 4: Need for self-esteem, for example, for important projects, recognition, intelligence, prestige and status.

Level 5: Need for self-actualization, for example, for opportunity for innovation and creativity, autonomy, self-awareness. I would identify this level with a full expression of Aristotelian flourishing.

If we reject a naturalistic definition of health, then can medicine link a functional concept of health with a renewed concept of human flourishing? Huber *et al.* have redefined health as the ability to adapt and self-manage in the face of social, physical and emotional challenges [12]. Thus, they are arguing for a functional model of health. Can we ground this redefinition in a broader conceptual framework? Can we then relate this to how we practise health care? We can immediately see that health care is relevant to Maslow's level 1 survival needs. But perhaps, we underestimate the effects that both illness and health care itself may have on a person's overall well-being at Maslow's other levels. Serious illness may threaten the ability of a person to flourish at any of these levels. Unfortunately, health care interventions themselves may impair flourishing, for example, by reducing a person's sense of autonomy or self-esteem, or increasing their sense of vulnerability [18,19]. May *et al.* remind us that treatment itself may pose a health burden that is disproportionate to benefit [20].

The doctor's gaze

The first obstacles to defining health by reference to human flourishing is the models and language that determine our common medical culture. Iona Heath pointed out 'If we are to diagnose in psycho-socio-medical terms we need to find ways of recording the data . . . Whilst notes are written in biomedical language we are not making a proper diagnosis' [21].

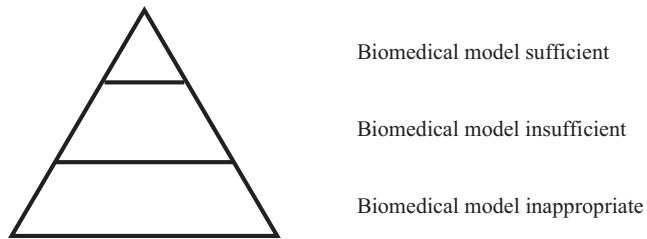


Figure 1 The relevance of the biomedical model. From Misselbrook [23].

Foucault describes how doctors modify the patient's story, fitting it into a biomedical paradigm, filtering out non-biomedical material [22]. Foucault calls this 'the doctor's gaze' – doctors systematically look at some bits of the story and exclude others. We tend to be doctor oriented because medical school has taught us more about biomedicine than about patients. We tend to use a biomedical model as our main source of meaning, rather than holding the biomedical model and the lay illness model together as parallel and equally valid sources of knowledge.

But surely, biomedicine could answer back? If I have broken my leg, all that matters is what the X-ray looks like and how it can be fixed. If I have bowel obstruction, my problems with my boss are irrelevant. But this argument fails because most people coming to a doctor do not have straightforward biomedical problems such as broken bones and obstructed bowels. Reality is more complex, and functions on more than one level.

The relevance of the biomedical model to health problems is presented in (Fig. 1) [23].

Even with a clear biomedical diagnosis, the nature of the medical problem is different at three different times:

- i. Biomedical model sufficient: 'Doctor, Johnnie's just fallen off the slide – his leg is bent at a funny angle, and he's screaming in pain'.
- ii. Biomedical model insufficient: 'Doctor, Johnnie is back at school now on crutches, but finding it difficult. On Monday morning he said his leg was really hurting again'.
- iii. Biomedical model inappropriate: 'Doctor, Johnnie is out of his plaster now and walking fine, but he's lost his place in the school athletics team. He says he doesn't want to go to school, and last night I heard him crying in his room'.

If we are to reduce suffering and contribute to the patient's ability to write an unencumbered life narrative, then we must deal with the multidimensional realities that patients bring with them into our consulting rooms. We can only deal with this if we can see it. To see it, we need to have a language for it. If we believe that 'the end of the medical art is health', then we need to use medicine in such a way as to maximize the person's ability to flourish. We must therefore have a broad view of human flourishing and ensure that any medical intervention takes account of benefits and harms as a whole, not only within a narrow biomedical sphere.

Health as 'the strength to be'

Deitrich Bonhoeffer defined health as 'the strength to be' [24]. Health is thus the ability to pursue our life story without insurmountable obstruction from illness. Unless I am an Olympic skier,

I can be healthy even after the loss of a leg. If I am Olympic skier, I can regain health – I can still flourish – by seeking the courage to rewrite my life script. Thus, health can be seen as the ability to flourish without being unduly impeded by illness or disability or, if necessary, by overcoming illness or disability.

So might this give us a clue as to what health care is for? However advanced our treatment of disease may be, we can never banish illness. At the very least, medicine must recognize and deal with both disease and illness, and the disability that may relate to either. Health care exists for the benefit of the patient. Health care should therefore include both processes and outcomes that are valid primarily in the world of the patient, not primarily the world of the doctor.

Toon contrasts what he calls the 'biomechanical' and 'interpretative' approaches to health care [25]. He comments that 'seeking pleasure and avoiding pain are not the highest goods'. He advocates health care, which both serves the patient's own life narrative and where possible contributes to the patient's understanding of their narrative.

Fulford also rejects Boorse's naturalism in psychiatry [26]. He argues that diagnoses cannot be established from empirical observation within the physical world alone. He advocates a model of 'values-based practice' [27]. He asserts that human flourishing within medical practice can only be pursued by the use of values, or value-laden concepts, in bringing meaning to observable facts.

What determines our medical gaze cannot be separated from our belief about the nature of health. Or to be more accurate, our operational belief not necessarily the belief to which we pay lip service. It is impossible to exclude values from this equation. If we hold a biomedical model of health, then we can be happy with a simple biomedical gaze. If we hold a WHO model of health, biomedical with knobs on, then our gaze is biomedical with the psychosocial dimensions bolted on, but not necessarily integral to the working of the structure, and conveniently placed in our peripheral vision. But if we truly believe in a multidimensional model of health, which includes the biomedical, social, psychological, anthropological and spiritual dimensions, then we are swimming against the stream. The current UK NHS reforms are staunchly biomedical and managerial in their gaze. Evidence-based medicine (and its sources such as the Cochrane collaboration) is predominantly biomedical. We are in a culture that pays lip service to the broader needs of the patient, but commonly ignores any attempt to catalogue or understand those needs. Patients' needs are multidimensional. Can our gaze rise to the challenge to see them?

I have previously described three competing concepts of health [28]:

- The WHO definition of health as 'not merely the absence of disease or infirmity but a state of complete physical, mental and social well-being'. This model is unusable and I will not pursue it further.
- The naturalistic or biomedical model – health as the absence (or cure) of biomedical abnormalities. Following the failure of the WHO model this tends to be the default model of current medical practice.
- The functional model – health as unimpaired flourishing, or as 'the strength to be' – to be free of obstacles, or to be able to surmount obstacles, to my dynamic life plan. This is derived from

a normative model of health, but shifts its focus explicitly to optimal function rather than optimal form or physiology.

Having discarded the WHO concept of health, this gives us two contrasting models for health care:

- Model 1: Health care exists in order to maintain biomedical parameters within the normal range. Two legs, Na^+ 136–145 mml L^{-1} , systolic below 140 mmHg, no dyskaryotic cells seen. This involves controlling any aspects of patients' lives that threatens these normal measurements. Proper health care necessitates continuous surveillance of the population for possible biomedical abnormalities.
- Model 2: Health care exists to enable patients to live the lives that they choose, as much as possible unencumbered by, or despite, illness or disability. We will wish to reduce suffering where this is compatible with the patient's pursuit of their goals. We will wish to delay death where this is compatible with the patient's pursuit of their goals, and when the attempt does not produce undue suffering. We will balance the treatment benefits against treatment burdens. Aspects of option one will be seen as appropriate only when they serve these goals.

We tend to think of guidelines, rules, management systems and frameworks as inevitable marks of progress in the modern world. But what if a lot of this effort were mistaken? Yes, of course, there is evidence that some ways of doing things are better than others. But evidence often relates to linear rules ('if A is X then do Z'). The real world presents us with complex situations ('A is approximately X but we do not know if B is currently Y or W and it seems likely that D and H will influence this situation in ways that may be difficult to predict'). And Tuckett reminds us that different patients have different priorities, and the patient is the only expert on their own life goals [29].

We will need Aristotle's *phronesis*, or practical wisdom, to practise the sort of medicine described in model 2, using biomedicine as an instrumental tool not as an end in itself [30]. Aristotle would have been astounded at our persistent attempts to navigate our actions in a complex world by using algorithms, whether National Institute of Health and Care Excellence (NICE) guidelines or administrative protocols. *Phronesis* puts reflective and mature human judgement, not rules, bang in the middle of all complex decisions. Therefore, making the best judgement in a complex situation does not rely on having the best algorithm but on being the best person. Best in the sense of one who is skilled, who has trained themselves by reflection on experience, and also by integrity of character.

Conclusions

Health care should maximize human flourishing. I would offer this goal for health care: Health care should aim for the state of least possible illness or disability, or of maximal functional adaptation to illness or disability. You will notice that this goal contains no reference to disease. Disease is the doctor's territory. Disease only matters instrumentally because it may cause illness or disability to the patient. Our goals for health care should relate to real-world outcomes for the patient, not the doctor.

We need such a definition of health care unless we wish to see the whole population deemed unhealthy as defined by a utopian biomedical gaze, and thus in need of medical intervention. This definition does not decry the role of biomedicine, but rather redi-

rects our attention as to the purpose and proper function of biomedicine. If there is anything that stands in the way of me fulfilling my life goals that can be fixed by biomedicine, then this model tells me to fix it. But in reality, there is so much sickness that we cannot fix, and this model gives me a more dynamic and a more patient-oriented way to seek ways round, or ways of coping with the unavoidable. How can a doctor act if s/he sees his/her role to be to maximize human flourishing and to minimize illness and disability? One can think of such a doctor's role as having four components [31]:

- 1 Biomedical technician – yes, we do fix things, and are right to be proud that we can. We are fixers who should understand the use, limits and dangers of medicine.
- 2 Shaman – a culturally defined secular priest. A parental figure that alleviates the stress of illness and sanctions changes in the patient's social roles during illness [32]. In Dunstan's words, we are society's 'accredited moral agents' [33].
- 3 Sickness guide – an advisor/client relationship, steering people towards other services that may fix them, or facilitating coping mechanisms that will help them to maximize their 'strength to be' while enduring illness. We translate between the patient's world and the medical world.
- 4 Witness – one who is prepared to support and listen to cathartic discharge of anxiety, and to be a witness to the darker chapters of other people's life narratives [34]. We are the naturalists of the streets and homes of our fragmented society. We listen and understand, we categorize and we try to put into words what we see. We try to help the patient make sense of their life narrative and thus to continue it.

Our biomedical knowledge should be used to serve our patients' individual life plans. As patients are people one size fits few, and all sizes need to be freely available. I am not asking that we should be free to practise second-class medicine, but rather that we should serve the patient not biomedicine.

References

1. Aristotle (1998) *The Nicomachean Ethics*, p. 1. Oxford: Oxford University Press.
2. Hume, D. (1751) *Enquiry concerning the principles of morals*. Many reprints available, e.g. Oxford: Oxford University Press (1975).
3. McNaughton, D. (1988) *Moral Vision*, p. 17. Oxford: Blackwell.
4. Putnam, H. (2002) *The Collapse of the Fact/Value Dichotomy and Other Essays*. Cambridge, MA: Harvard University Press. Ch 2.
5. Russell, B. (1919) *Introduction to Mathematical Philosophy*, p. 182. London: G. Allen & Unwin.
6. Aristotle (1998) *The Nicomachean Ethics*, p. 155. Oxford: Oxford University Press.
7. Waddell, G. & Aylward, M. (2010) *Models of Sickness and Disability*, p. 3. London: RSM Press.
8. Armstrong, D. (1995) The rise of surveillance medicine. *Sociology of Health & Illness*, 17 (3), 393–404.
9. Meador, C. (1994) The last well person. *New England Journal of Medicine*, 330, 440–441.
10. Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19–22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948." See: <http://www.who.int/about/definition/en/print.html>

11. Foucault, M. (1989) *The Birth of the Clinic*, p. 35. London: Routledge. (First published as '*Naissance de la Clinique*'. France: Presses Universitaires de France, 1963).
12. Huber, M., Knottnerus, J., Green, L., *et al.* (2011) How should we define health? *British Medical Journal*, 343, d4163.
13. Boorse, C. (1977) Health as a theoretical concept. *Philosophy of Science*, 44 (4), 542–573.
14. Hamilton, R. (2010) The concept of health: beyond normativism and naturalism. *Journal of Evaluation in Clinical Practice*, 16, 323–329.
15. Boorse, C. (1977) A rebuttal on health. In *What is a Disease?* (eds J. M. Humber & R. F. Almeder), pp. 1–134. Totowa, NJ: Humana Press.
16. Aristotle (1998) *The Nicomachean Ethics*, p. 4. Oxford: Oxford University Press.
17. Maslow, A. (1943) A theory of human motivation. *Psychological Review*, 50, 370–396.
18. Murray, M. & McMillan, C. (1993) Health beliefs, locus of control, emotional control and women's cancer screening behaviour. *British Journal of Clinical Psychology*, 32, 87–100.
19. Marteau, T. (1990) Screening in practice: reducing the psychological costs. *British Medical Journal*, 301, 26–28.
20. May, C., Eton, D., Boehmer, K. *et al.* (2014) Rethinking the patient: using burden of treatment theory to understand the changing dynamics of illness. *BMC Health Services Research*, 14, 281–292.
21. Heath, I. (1999) Keynote Address. Regional Postgraduate General Practice Educational Conference, South Thames (East). Guys Hospital.
22. Foucault, M. (1989) *The Birth of the Clinic*. London: Routledge. Ch 6.
23. Misselbrook, D. (2001) *Thinking about Patients*, p. 23. Newbury: Petroc.
24. Bohnoffer, D. (1953) *Letters and Papers from Prison*. London: SCM Press.
25. Toon, P. (1999) *Towards a Philosophy of General Practice: A Study of the Virtuous Practitioner*. London: Royal College of General Practitioners. RCGP occasional paper number 78.
26. Fulford, K. M. W. (2001) What is (mental) disease?: an open letter to Christopher Boorse. *Journal of Medical Ethics*, 27, 80–85. doi: 10.1136/jme.27.2.80.
27. Fulford, K. W. M., Peile, E. & Carroll, H. (2012) *Essential Values-Based Practice*. Cambridge: Cambridge University Press.
28. Misselbrook, D. (2001) *Thinking about Patients*, p. 189. Newbury: Petroc.
29. Tuckett, D., Boulton, M., Olson, C. & Williams, A. (1985) *The Consultation: Meetings Between Experts*. London: Tavistock Pub.
30. Aristotle (1998) *The Nicomachean Ethics*. Oxford: Oxford University Press. Book VI.
31. Misselbrook, D. (2001) *Thinking about Patients*, p. 198. Newbury: Petroc.
32. Helman, C. (1990) *Culture, Health and Illness*, 2nd edn. Oxford: Butterworth-Heinemann Ltd. Chapter 4.
33. Dunstan, G. (1994) *The John Hunt Lecture*. London: Royal College of General Practitioners.
34. Heath, I. (1995) *The Mystery of General Practice*. London: The Nuffield Trust.