Poiesis Prax (2002) 1: 135–149 © Springer-Verlag 2002 DOI 10.1007/s10202-002-0012-3

Original paper

Medicine as practical wisdom (*phronesis*)

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Abstract Modern medicine faces fundamental challenges that various approaches to the philosophy of medicine have tried to address. One of these approaches is based on the ancient concept of *phronesis*. This paper investigates whether this concept can be used as a moral basis for the challenges facing modern medicine and, in particular, analyses *phronesis* as it is applied in the works of Pellegrino and Thomasma. It scrutinises some difficulties with a *phronesis*-based theory, specifically, how it presupposes a moral community of professionals. It is argued that Pellegrino and Thomasma's concept of *phronesis* corresponds to a Hippocratic concept of *téchnê*, and that this latter concept seems to address many of the challenging issues Pellegrino and Thomasma also address. Thus, if modern medicine is to find its philosophical model in ancient concepts, it appears that the Hippocratic *téchnê* is closer to the ancient concept of medicine than the Aristotelian *phronesis*, and that it might avoid many of the pitfalls of a *phronesis*-based approach.

Zusammenfassung Die moderne Medizin scheint fundamentalen Herausforderungen gegenüberzustehen. Mit diversen Ansätzen hat die Philosophie der Medizin versucht, diesen Herausforderungen zu begegnen. Ein solcher Ansatz basiert auf dem alten Konzept der Phronesis. Dieser Artikel geht der Frage nach, ob dieses Konzept der modernen Medizin als moralische Grundlage bei der Lösung ihrer Probleme dienen kann. Die Analyse gilt insbesondere den Anwendungsformen der Phronesis in den Arbeiten von Pellegrino und Thomasma. Es werden einige Schwierigkeiten der auf Phronesis

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I am most thankful to Professors Julia Annas, Jan Helge Solbakk and Søren Holm for their valuable comments on drafts of this paper.

basierenden Theorie aufgezeigt, insbesondere die von ihr vorausgesetzte Moral des Berufsstands. Es wird der Standpunkt vertreten, dass das Konzept der Phronesis von Pellegrino und Thomasma dem hippokratischen Téchnê-Konzept entspricht und dass sich dieses Konzept mit vielen der schwierigen Probleme, die sie ansprechen, auseinandersetzt. Wenn die moderne Medizin tatsächlich ihr Vorbild in antiken Konzepten finden sollte, scheint die hippokratische Téchnê dem antiken Konzept der Medizin näher zu sein als die aristotelische Phronesis und viele Probleme des auf Phronesis basierenden Ansatzes umgehen zu können.

Résumé La médecine moderne semble être confrontée par des défis essentiels. La philosophie de la médecine a tenté par différentes approches de répondre à ces défis. L'une de ces approches se fonde sur l'ancien concept de la phronésis. Le présent article examine dans quelle mesure ce concept peut servir de fondement moral à la médecine moderne pour faire face à ces défis. L'analyse s'attache en particulier aux applications de la phronésis dans les travaux de Pellegrino et de Thomasma. Certaines difficultés inhérentes à une théorie fondée sur la phronésis sont examinées, notamment le postulat d'un consensus moral de la profession. L'article défend le point de vue selon lequel le concept de phronésis de Pellegrino et Thomasma correspond à un concept hippocratique de techné et que ce concept semble s'attaquer à un grand nombre des problèmes complexes qu'ils abordent. Si la médecine moderne devait véritablement trouver son modèle dans les concepts de l'Antiquité, il semble que la techné hippocratique soit plus proche du concept antique de la médecine que la phronésis d'Aristote et qu'elle pourrait s'éviter bien des problèmes liés à une approche fondée sur la phronésis.

Introduction

How are we to understand the rationality of clinical reasoning in order to help medicine face fundamental epistemological, ethical and practical challenges? This is a basic question in the philosophy of medicine and has been addressed from a wide range of theoretical positions. Some have argued that we have to return to ancient concepts in order to face these challenges. Many scholars argue that medicine should be thought of as art (*téchnê*) [1, 2, 3, 4, 5, 6], and some claim to find the proper foundation for medicine in a combination of art and science (*episteme*) [7]. Others, however, maintain that the paradigm of medicine is to be found in the concept of practical reasoning (*phronesis*).

Can the concept of *phronesis* be applied to address the basic epistemological, ethical and practical challenges of modern medicine? This is the key question discussed in this paper. Two frequently cited authors in medical philosophy who give a positive answer to this question are Pellegrino and Thomasma [8, 9, 10, 11, 12]. This paper analyses their philosophy in order to investigate whether *phronesis* can be applied as a basis for a fruitful philosophy of medicine. It will also explore some alternative views of *phronesis*.

Pellegrino and Thomasma's main objective has been to investigate the nature and end of the medical discipline, and to establish a medical philosophy based on medicine as a practice. A keystone of their medical virtue ethics is the concept of practical wisdom, *phronesis*. "Clearly, if virtue theory is to have a place in a comprehensive moral philosophy of medicine, its pivot must be the virtue of prudence or *phronesis*" ([12], p. 90). With its practical end, medicine is a *tertium quid*. "The goal of medicine is primarily the relief of perceived body disruption, not scientific explanation" ([11], p. 76). Clinical judgement is a specific type of reasoning that gives medicine its own kind of rationality ([11], p. 59). It requires practical wisdom, being distinct from both art and science ([11], p. 149). It is the

clinical interaction between physician and patient that establishes medicine as a unitary discipline ([11], pp. 64–65), making *phronesis* its cardinal virtue ([11], p. 59, [12], pp. 8 and 84). *Phronesis* mediates between clinical medicine's intellectual and moral virtues ([12], pp. xiii, 84 and 87). The question pursued in this paper is whether *phronesis* is the 'missing link' in the philosophy of medicine.

Although Pellegrino and Thomasma differentiate *phronesis* from both art and science, they argue that medicine is an integration of all three intellectual virtues, *episteme*, *technê*, and *phronesis* ([11], p. 148). The latter is the link of cohesion, and the basis of medicine. *Phronesis* introduces the normative issue of whether what *is* possible *ought* to be done, and such is the normative basis of medicine. Unfortunately, Pellegrino and Thomasma are not explicit in their definition of *phronesis*, nor are they clear on how we are to think about its integration with art and science ([13], p. 182). But in their later work they have elaborated the concept in more detail [12], and others have tried to explicate their position [14].

To assess whether Pellegrino and Thomasma's concept of *phronesis* can be used to address the challenges of modern medicine, the concept as applied in their writings should first be investigated.

Phronesis in modern medicine

Pellegrino and Thomasma opt for the classical definitions of *phronesis* of Aristotle and Thomas Aquinas ([12], p. 12). Under the title *Phronesis: Medicine's Indispensable Virtue*[1], they give a description of the concept in a variety of aspects ([12], pp 84–91). These seem to fall into six categories: firstly, *phronesis* is one of the cardinal virtues and, at the same time, the keystone virtue. It is the general "capacity for moral insight". In this, *phronesis* "shapes the other virtues" because it represents understanding of how these virtues are to be applied in a particular case.

Secondly, it is one of the intellectual virtues, and rests on reason. *Phronesis* endows its possessor with the deliberative capacity to reason. As an intellectual virtue it "disposes us habitually to attain truth for the sake of action, as opposed to truth for its own sake" In this it permits us to discern which means are most appropriate to the good in particular circumstances. In medicine, this enables the physician to apply general knowledge for the best of a particular patient.

Thirdly, *phronesis* provides a grasp of the end – the good – of our action. It enables us to tell when an end is in jeopardy. *Phronesis* is the "*telos* of the physician *qua* human being, the life of fulfilment and flourishing".

According to the fourth category, *phronesis* is the link between the intellectual and moral virtues (and also the supernatural virtues)[2]. It is a guide to right

[1] Pellegrino and Thomasma seem to apply the term *phronesis* when referring to the Aristotelian concept, and *prudence* when referring to Thomas Aquinas, but they are not consistent in this. This paper uses the term *phronesis*, with a reference to the Aristotelian conception, as "practical wisdom". A more detailed exploration of the term will follow. The term "prudence" will be applied, though, in quotations. Similarly, the authors are not consistent in their application of *virtue* and discuss the virtue of a virtue. "...virtuous persons are distinguished as agents, and their acts as well, by a capacity to be disposed habitually not only to do what is required as duty but to seek the perfection – the excellence, the *areté* of a particular virtue." ([12], p. 166). In this paper the term virtue has the same meaning as the Greek *areté*.

[2] According to Pellegrino and Thomasma *phronesis* has a double role. They state that *phronesis* is the link between the intellectual and the moral virtues ([12], p. 85), and at the same time that it is both an intellectual and a moral virtue. "Prudence is therefore both an intellectual and a moral virtue in medicine, as it is in moral encounters generally." ([12], p. 87).

actions in relation to all the virtues. “Prudence shapes the other virtues, since it relates all the means at our disposal to attain the good specific to us as humans or to the work in which we are engaged.” ([12], p. 85). Medicine, according to Pellegrino and Thomasma, is defined by clinical interaction, practical wisdom is therefore the unitary principle in medicine.

Fifthly, as an intellectual disposition and a capacity for moral insight, *phronesis* is related to a good character trait. The good physician is good in terms of his character. Pellegrino and Thomasma seem to follow MacIntyre in their conclusion that the virtues rely upon the values of a given community ([12], p. 31, [15], p. 139). Thus, the basis of medical virtue ethics is the moral community of professionals, with *phronesis* as their cardinal virtue.

Lastly, Pellegrino and Thomasma answer the question of Meno to Socrates: “is virtue something that can be taught? Or does it come by practice?”[16]. They believe that virtues essential to being a good physician can be taught ([12], p. 175). Thus *phronesis*, the keystone virtue, can be taught.

Pellegrino and Thomasma combine their Aristotelian conception of *phronesis* with that of Thomas Aquinas. According to Aquinas, *phronesis* was the right way of action, *recta ratio agibilium*. In addition, its discerning capacity is extended to the supernatural virtues of faith, hope and charity. Pellegrino and Thomasma also suggest that *phronesis* “may link the emotions with the virtues, perhaps closing the gap between cognition of the good and motivation to do the good. Prudence has this possibility, since it combines reason with disposition.” ([12], p. 90).

Human good and good function

Pellegrino and Thomasma make one important restriction to their application of *phronesis* and virtue ethics in medicine. They restrict it to excellences of the work of the human being. In chapter VI in Book II, Aristotle says: “Let us assert, then, that any kind of excellence renders that of which it is the excellence *good*, and makes it perform its function *well*.” ([17], 1106a 15–17)[3]. Pellegrino and Thomasma argue that it is beyond their scope to define the excellences that make a person good as a person. This is a contextual matter, subject to vigorous debate ([12] pp. 85–86). They choose to concentrate on the second part of Aristotle's definition: the good function[4].

The good function of the physician is related to the end of medicine. “The ultimate end is the health of individuals and society, while the more proximate end is a right and good healing action for a specific patient” ([12], p. 86, [11], pp. 119–152). But, as argued above (point three), the end is also related to the *telos* of the particular physician. In their elaboration of how these functional ends are to be achieved, Pellegrino and Thomasma refer to certain character traits that are typical for physicians. These are virtues like compassion, fidelity to trust, honesty, intellectual humility, loyalty, respect and benevolence.

But are these requirements for certain character traits contradictory, that is, do these virtues not contradict each other in the practice of medicine? Do they break the restriction of only treating the virtues of medical function and not of the character of the physician as a human being; that is, are virtues like compassion,

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[3]The quote is from J.A.K. Thomsons translation. In Ross' translation “good work” is used.

[4]Julia Annas points out that Aristotle, as Plato, insists that working for a living was not compatible with developing virtues. “But even Plato and Aristotle, who are most extreme in their contempt for working for a living, have no model but skill for this ...” ([18], p. 72). This indicates that Pellegrino's and Thomasma's focus on work conflicts with Aristotle's concept.

honesty, loyalty, respect and benevolence not general virtues for pursuing the good life in general? A sympathetic interpretation of their concept answers no to both these questions. Modifying Aristotle's example ([17], 1106a, 17ff.) slightly, we might argue that the excellence of a physician makes him/her both a fine physician and good at healing patients.

But how do these specific virtues relate to more general virtues? How are we to differentiate the medical virtues from other virtues? Are the medical virtues general virtues that apply to physicians in a particular manner, or to a special degree? Do these virtues apply to them only as physicians, or as human beings in general? Aristotle himself rejects the dialectical argument that virtues exist in separation from each other ([17], 1144b30–1145a11). Pellegrino and Thomasma seem aware of these difficulties, and at the end of their treatment of the concept of *phronesis* conclude that "a person who is a prudent physician cannot avoid being a good person in at least one sector of life. ... Prudence, habitually exhibited in medical practice, conduces to happiness, that is to a satisfying life in medicine." ([12], p. 91).

Aristotle himself seems to apply the particular case of an eye and a horse to elaborate what kind of disposition a virtue is ([17], 1145a1–2). His conclusion seems to be that, in the same way as the particular virtue enables its possessor to function in accordance with this virtue, the virtuous man in general functions well. A good man acts well as a father, as a physician, or as a politician. It thus seems difficult to differentiate the virtues. According to Aristotle, it is possible to be a good man and act immorally, but not to possess one virtue without possessing them all ([17], 1145a1–2). This reciprocity of the virtues, together with the concept of *phronesis* as a general uniting concept of the virtues ([17], 1140a24–6, [18], pp. 73–84, [12], p. 84), seems to cause difficulties in maintaining a separate set of professional virtues for physicians. Thus, it appears to be troublesome to establish a moral community of professionals separate from the general moral community, at least in the Aristotelian context.

Beyond the Aristotelian concept of *technê iatrikê*

Other aspects of the concept of *phronesis* given by Pellegrino and Thomasma also seem to cause difficulties. For example, they state that "[p]rudence is ... both an intellectual and a moral virtue in medicine, as it is in moral encounters generally" ([12], p. 87). This seems to conflict with the Aristotelian emphasis that *phronesis* is an intellectual virtue of deliberation ([17], 1140a24–b30). *Phronesis* is an intellectual (*dianoetic*), and not an ethical virtue. *Phronesis* belongs to those who understand the management of households and states ([17], 1140b10–12), however, this is as domestic, legislative and political *sciences*. Thus it is related to practical life but, in terms of reason, as an intellectual virtue.

The end of medicine is central to Pellegrino's and Thomasma's concept of *phronesis*. But Aristotle seems to be rather explicit as to what is the end of *phronesis*: the action itself ([17], 1140b5–7). If an action has an end other than itself, it is a *technê* ([17], 1140b6–7). Aristotle seems to differentiate between actions that have an end and actions that do not: "Where there are results distinct from the actions, then the results by nature are superior to the activities" ([17], 1194a9–10). Medicine is such an action, having an end other than its activity, and the end of the medical action appears to be the health of a particular patient.

As alluded to at the beginning of this article, Pellegrino and Thomasma see *technê iatrikê* as an integration of *technê*, *episteme* and *phronesis*. Medicine is a

practical activity, *phronesis* is therefore the keystone virtue that gives medicine rationality, quite distinct from both *techné* and *episteme*. This, however, appears to contradict the Aristotelian application of medicine as an example of a *techné*.[5] At the opening of the *Nicomachean Ethics*, Aristotle applies medicine as a model of a particular science ([17], 1094a6–8). He does the same in defining the concept of understanding (*sunesis*) ([17], 1142a25–6). Medicine thus explicitly is applied as an example of *techné*, it is not used to explain the practical aspect of *phronesis*.[6] On the contrary, medicine is applied to differentiate *phronesis* from *techné* ([17], 1140a27–9).[7]

The premise that the concept of *phronesis* has been constant from Hippocratics to the Medieval period, is also difficult to defend. "This concept of practical wisdom prevailed in Western moral philosophy relatively unchanged until the thirteenth century ..." ([12], p. 84). Various commentators on the concept of *phronesis* have maintained that there is variety in its application, even in ancient language and philosophy.

The sixth statement on *phronesis*, above, shows that Pellegrino and Thomasma believe it is possible to teach virtue and *phronesis*. It is not something that comes by practice, at least not alone. But this implies that the practical wisdom is theoretical (*episteme*), which is obviously what they want to reject. Aristotle himself points out the importance of practice and habituation to develop the character ([17], 1105 b8–11, 1179b20–31). There is no handbook of virtuous success ([18], p. 71).[8] Some forms of practical knowledge can be taught, but these are skills (*téchnai*).

This is not the proper place to enter the interesting but comprehensive debate on the concept of *phronesis*, the literature on the topic is extensive [14, 18, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33]. But it seems important to analyse the interpretation made by Pellegrino and Thomasma in relation to a common interpretation of the concept.

On *phronesis* in Aristotle's *Ethics*

It has been claimed that the concept of *phronesis* in the Eudemian and Nicomachean ethics are different [24]. But following the investigation by A. Kenny, there now seems to be wide agreement that both ethics actually hold the same concept of *phronesis* [32]. From Pellegrino's and Thomasma's interpretation, it is clear that the concept has a plurality of aspects. Many commentators seem to think of *phronesis* as non-moral reasoning on the application of the right means to a given end. This accords well with the second outline of *phronesis* given by Pellegrino and Thomasma. *Phronesis* is practical wisdom by knowledge of how to apply a general rule in a particular situation ([17], 1141b14–20, 1142a23–30,

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[5] Gillett argues that the Aristotelian concept of *techné* is a dynamic interplay between both praxis and conceptualisation [19].

[6] Medicine is applied to explain the restricted precision that is possible in practical sciences ([17], 1104a6–11), and that it provides for the realisation of wisdom ([17], 1145a4–11).

[7] On Aristotles' application of medicine as an example, see also [17], 1097a10–5, 1105b15–8.

[8] Others also argue that we should not expect everybody to be capable of the discernment necessary for sound moral judgement ([20, 21], p. 222).

[9] It is interesting to note that Pellegrino and Thomasma emphasise that *phronesis* is not synonymous with the practice of casuistry ([12], p. 85). In at least one of their interpretations it seems to imply compatibility with casuistry, understood as the resolving of specific cases through interpretation of principles.

1144a7–9, 1112b14–15). In the medical context, the virtue of the physician is to relate the particular patient to the general corpus of medical knowledge.[9]

If this is all there is to the concept of *phronesis* then its application in medicine is limited. The knowledge of *how* to apply general medical knowledge to a particular situation does not necessitate any considerations of the *telos* of the particular patient. If a patient is hospitalised because of chest pain, the virtuous physician, by careful examination and testing, finds that the patient has a certain kind of myocardial ischemia, and will treat him accordingly. The intellectual capacity to act according to a general rule in a particular situation does not include reflection on the rule itself.[10] Questions of the *telos* of the particular patient, and whether the general knowledge actually is *good*, as well as what it is to be a good physician, is a central part of medicine, not integrated in this non-normative conception of *phronesis*.

Other interpretations hold that Aristotle includes intuition and reflection over the end of action, the *good* itself. In this way, *phronesis* includes reflection on the good life in general, and facilitates its application in the particular case. This solves the limitation of the non-normative concept, but introduces new difficulties. If *phronesis* is reflection on happiness in general, then it is difficult to restrict it to a particular profession. A more sympathetic interpretation, allowing a gradual development of *phronesis* from the application of a rule to the reflection of happiness in general, does not seem to solve the problem. To what extent is the virtuous physician, *qua* physician, able and obliged to reason on the good life in general?

To avoid these limitations we might interpret *phronesis* as a result of practice and habituation. Through practice the disposition to virtuous acts will develop. Finally, we will grasp what actions we should pursue and the end itself (*good*), which we did not understand at the beginning [30]. This concords with Pellegrino's and Thomasma's third, fourth and fifth statement, related to the ability to grasp the end, the link between the intellectual and the moral virtues, and the character trait of the physician. But, as argued, we still do not escape the difficulties related to the moral community of professionals.

Widdershoven-Herding tries to explicate and expand Pellegrino and Thomasma's analysis of *phronesis* (applied in medicine). She concludes that medicine is practical reasoning clearly distinct from science, and that the normative aspect of medicine thus lies in the concept of *phronesis* [13]. But this is difficult to maintain, as Aristotle seems to be clear on the intellectual aspect of *phronesis*. "It is clear then that even if prudence were not practical, it would still be necessary, because it is the virtue of its part [of the soul]" ([17], 1145a2–4).

This does not mean that prudence or virtue ethics are not suited for application in medicine. It only suggests that the Aristotelian concept of *phronesis* (in the interpretations of Pellegrino and Thomasma) entails several difficulties if applied as the basis of the normative aspect of medicine. To Aristotle, medicine (*technê iatrikê*) was a *technê*. How then can a modern concept of *phronesis*, prudence, be applied in medicine? The answer of Pellegrino and Thomasma is: in a moral community of professionals.

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[10] For Aristotle both *technê* and *phronesis* are deliberative intellectual virtues (*to logisticon*). "We deliberate not about ends, but about means. A doctor does not deliberate whether to cure his patient" ([17], 1112b14–15). The end is given and, by deliberation, the doctor finds the suitable mean. In this interpretation both *technê* and *phronesis* precludes the normativity of medicine.

The moral community of professionals

Pellegrino and Thomasma argue that "medicine is at heart a moral community and always will be; that those who practice it are *de facto* members of a moral community, bound together by knowledge and ethical percepts ..." ([12], p. 32). They refer to three antecedent models of medical communities: the guild model of the Hippocratic medicine, the Christian model of charity, and the model of the community of gentlemen. Criticising all three models for being either communities of privileges, or communities ruled by religious commitment, Pellegrino and Thomasma propose a new model of a *phronesis*-based moral community of professionals.

There are three aspects of medicine that make it a moral enterprise. Firstly, the unique nature of illness and the asymmetry between the physician and the patient constitutes a moral claim and a common bond between the helpers. Secondly, medical knowledge is acquired through the privilege of medical education. The non-proprietary nature of medical knowledge gives a clear responsibility in its application. Thirdly, Pellegrino and Thomasma refer to the nature and circumstance of a professional oath resulting in a particular common self-conception. Thus, medicine's moral aspects are constituted and governed by the community of professionals.

A philosophy of medicine based on *phronesis* actually needs a moral community of professionals for several reasons. Pellegrino and Thomasma's third characteristic of *phronesis* was that it provides a grasp of the end – the good – of the physician's action. Phronesis is the "*telos* of the physician". If each physician had his/her own end, pursuing their own "life of fulfilment and flourishing", it would endanger medicine conceived of as an organised practical rationality. Correspondingly, it would seem arbitrary if the virtues of the physicians, such as benevolence, compassion, honesty and loyalty, were not co-ordinated. A moral community of professionals is able to unite and direct the ends and virtues of the physicians.

Furthermore, *phronesis*, according to Pellegrino and Thomasma, is related to the character trait of the individual physician. Again, if medicine is supposed to be a united activity, the theory of *phronesis* needs a moral community of professionals to gather it. Additionally, if *phronesis* can be taught (sixth characteristic), and is the basis of such a collective activity as modern medicine, it has to be taught in a community of professionals.

That is, a *phronesis*-based philosophy of medicine needs a moral community of professionals to gather and govern the character traits, ends and virtues of the individual physician. It is needed to avoid arbitrariness. However, there appear to be several difficulties with this basic institution of Pellegrino and Thomasma's philosophy of medicine.

Difficulties with the moral community of professionals

It does not seem to be clear that the asymmetry between a particular physician and a particular patient might result in a common moral bond of professionals adding anything exclusive to other asymmetrical responsibilities. Could beneficent medical knowledge not be proprietary? Does the common education in medicine grant any moral community? Is it not possible that the moral that is promoted by medical education can be wrong [34, 35]? What about alternative medicine – do the alternatives not form a moral community both through the nature of illness as well as the education? The oath of graduation today mainly has the same aim as the Hippocratic oath: to ensure correct action. But these oaths might be subject to the same critique as that expressed in Edelstein's analysis of

the Hippocratic oath: the reason to ensure correct action was to ensure the trust of the patient, not due to ethical considerations, but rather to secure economic interests [36].

This is not the place for a thorough analysis of the foundation of Pellegrino's and Thomasma's moral community of professionals, but some arguments related to their concept of *phronesis* should be developed further. Firstly, they criticise the historical antecedent professional moral communities for their privileges. There is nothing that indicates that the modern community of professionals is less privileged than its antecedents. Furthermore, the bond of knowledge and morality that is the glue of the community does not seem more uniting than that of either ancient medicine (guilds) or of the eighteenth century (gentlemen doctors). On the contrary, the epistemological inflation and corresponding specialisation of medicine has added to the controversies.

Secondly, many would claim that, to be a virtuous professional in modern medicine, the most important quality is not the character of the physician, but technical skill. "I'd rather have a competent bastard do my surgery, than a bumbling humanist." ([37], p. 26). This goes beyond the critics of modern medicine as "stranger medicine". The reason that physician's virtues, such as compassion, respect and benevolence, are not essential to patients today is primarily that they do not encounter the physician in the same manner as earlier, and that they face a wide variety of technical equipment and technicians. Rather, what is important is that "the behaviour of the professional conforms to the principles and rules of right action" ([38, p. 339). Virtue was essential to the old general practitioner, but not to modern medicine. The point here is that to be a virtuous physician in terms of 'the relief of perceived lived body disruption' one has to be a skilled person. To be able to be virtuous the physician has to know the latest achievements in the field. Veatch's point is that modern medicine is 'stranger medicine', and that 'sectarian medicine' is "little more than the romantic image of the small town physician" ([38], p. 338).

Thirdly, as alluded to, the relation between virtue and medical knowledge has yet another difficulty. From a pragmatic viewpoint, if the *phronesis* of medicine includes knowing the state-of-the-art,[11] it seems difficult ever to become a virtuous physician. Epsitemological inflation makes it almost impossible to keep up to date. It is a paradox that it appears to be impossible for an old and experienced physician to be virtuous, because he/she is not able to keep up with new, advanced and advantageous techniques, easily learnt and applied by the younger physicians. This poses the challenging question: who is the virtuous physician, the experienced doctor or the young physician who is updated on state-of-the-art methodology?[12]

Fourthly, according to Pellegrino and Thomasma, there is a higher demand on the virtues of healthcare professionals than on others. "In medical ethics we see the virtues as disposing physicians and nurses to higher degrees of sensitivity to

[11]That is, universals ([17], 1141b14–5).

[12]It might be argued that there is no necessary relation between medical knowledge and the virtue of its professionals today. Having the most updated information in medicine does not secure its proper application. A Socratic–Platonic answer would be that, if the medical information is not linked with its proper use, then it is not genuine medical knowledge [39]. If medical education does not teach the appropriate application of its content, then it is like flattery of the body (pastry-cooking) disguised as medicine [40]. On the relation between *technê* and *phronesis*, see also [41] and ([18], pp. 67–84). The stoics concept of phronesis as the skill of living is referred to by Annas ([18], p. 79).

self-determination, fidelity to trust, intellectual honesty, benevolence and justice because these virtues are integral to attaining the ends of practice of medicine." ([12], pp. 172, 40) [11]. Thus, there is a supererogative in the moral community of medicine, this poses challenging questions.

How should we understand this supererogative? A trivial interpretation would be to see it as a constitutive part of the profession. Medicine deals with people needing help and not with objects that are to be modified. Dealing with people's health demands particular caution. Pellegrino and Thomasma's interpretation is that the enhanced moral demand on healthcare professionals is restricted to their character as professionals, and not to their moral standards in general ([12], pp. 85–86). This, however, seems to contrast with their conclusion that a prudent professional cannot avoid being a good person in at least some other field of life ([12], p. 91). As argued, to dedicate or restrict particular virtues to a certain profession appears to be difficult. Besides, *phronesis* was defined as a keystone virtue, a "capacity for moral insight" in general, and a shaping and co-ordinating force of all of the virtues. Furthermore, do physicians need particular virtues, or do they need extended sensitivity to particular virtues? How do healthcare professionals become more virtuous than others? Are healthcare professionals more virtuous than others in the area of healthcare because they are professionals? To prescribe an enhanced sensitivity to certain virtues for a certain group of professionals rises the question of how to assess this sensitivity, and if it is a 'nine-to-five' phenomenon. These delicate issues appear not to be elaborated in Pellegrino and Thomasma's writings.

This leads us to one of the major challenges of Pellegrino and Thomasma's account: who is to assess the virtue of the moral community of professionals? Who can evaluate the character of a particular physician? As the virtues of the professionals are particular to the professional group, only members of the group can assess them. This entails the danger of sectarianism and paternalism, and redirects Pellegrino and Thomasma's critique of the medical guilds to their own theory. In times when physicians are accused of hiding errors and covering up for each other, it might be argued that the moral community of professionals appears to be an improper foundation for medicine's moral basis. In general, neo-Aristotelian interpretations of *phronesis* tend to entail the danger of elitism and authoritarianism [21]. Besides, the esoteric moral community of professionals might contradict the second criterion of *phronesis*, that it rests on reason. If *phronesis*, as the basis of medical practice in general and medical morality in particular, is rational and can be taught (the sixth characteristic), then it should be assessable by others.

Altogether, Pellegrino and Thomasma's conception of *phronesis*, and its basic moral community of profession faces severe challenges. Does this mean that *phronesis* is old-fashioned, out-dated and irrelevant for modern medicine? This has not, of course, been claimed here. The normative and epistemological difficulties described might well be a weakness of medicine itself, however, they may also be due to the virtue theory. So far, it has only been argued that there are practical and epistemological difficulties with virtue ethics in medicine based on the Aristotelian concept of *phronesis*, and particularly in the interpretation of Pellegrino and Thomasma. Julia Annas has argued that there are other foundations for virtue ethics omitting the difficulties of Aristotle [18], one such foundation is the stoic virtues.

The stoic virtues

Central to Stoic ethical theory is the emphasis on virtue being sufficient for happiness ([18], p. 388). Virtue is a part of an agent's development of a clarified

conception of happiness. According to the Stoics there are many virtues, possibly including distinct virtues relevant to the medical profession. These could include virtues like benevolence, practical and theoretical wisdom, and virtuous ability to interpret and communicate.

One of the main differences between Aristotelian and stoic ethics was the concept of 'other-concern' ([18], pp. 249–290). The Stoics go beyond the Aristotelian concept of friendship (*philia*), which was important to Aristotle's account of the virtues ([42], p. 69). However, it cannot be extended to encompass general others – concern typical in the context of modern medicine ([37], p. 221). The Stoics, on the other hand, insisted on the development of impartial concern for all humans, and that this other-concern had a different origin than self-concern.

Habituation and character were also less important to the stoics than to Aristotle. This relieves the difficulties of the focus on character of the agent, rather than the concern of the patient.[13] Other-concern also makes the ethical theory more robust against the danger of paternalism in medicine.

Reflection was essential to stoic ethics. The virtuous person was to reflect on his final end. She was to revise her priorities according to this end, and to be able to explain and justify particular actions in relation to the life as a whole. Intelligence was necessary to reach a unified intellectual basis for explanation of particular decisions and actions. To the Stoics, the agent needed *phronesis* to grasp the correct priorities in his life as a whole. *Phronesis* was thus unifying the virtues ([18], p. 81) and central to Stoic ethics. It is able to relate virtue to other valued things that make up a satisfactory life.

But if *phronesis* was the intellectual capacity to apply the right means to a given end, it resembled a skill (*technê*). This also seems to have been the view of the Stoics: *phronesis* was skill or expertise in living. A virtue did not only have the same intellectual structure as a *technê*, but it actually was a kind of *technê*. The virtue was a skill in selecting other goods. It was a global skill, whereas a particular skill is concerned with particular means ([18], pp. 79, 389, 404, 449).

How then does this fit with medicine? A virtue theory that emphasises happiness, including other-concern, seems more suited to medical practice than a moral community of professionals. Certain virtues might be distinct to the practice of the profession. These professional virtues are interrelated and related to the life of the professional as a whole by *phronesis*. In this interpretation *phronesis* appears to be more compatible with medicine.

The Stoics' concept of *phronesis* as a skill (*téchnê*) guides us back to the initial question of how ancient concepts could help modern medicine face its ethical, epistemical and practical challenges.

Medicine as *téchnê*

In antiquity, medicine (*téchnê iatriké*) undoubtedly was a skill. As alluded to, many of the characteristics of Pellegrino and Thomasma's conception of *phronesis* actually fit the Hippocratic concept of *téchnê*. As argued, Aristotle differentiates clearly between the intellectual virtues of *phronesis* and *téchnê*. This

[13] One still might ask whether the other-concern of the stoics is impartial and general, and not directed towards a particular person, e.g. the individual patient. But if the exercise of intelligence is "making of the right decision in the light of reflection on the agent's principles and the particularities of the case at hand" ([18], p. 405), then it must include the particularities of other-concern. Antiochus explicitly states that what unites the various virtues is exactly the other-regard ([18], p. 82).

paper ends by comparing Pellegrino and Thomasma's conception of *phronesis* with the Hippocratic concept of *téchnê*, and briefly investigates whether this concept of *téchnê* can actually address Pellegrino and Thomasma's demands for a philosophy of medicine.

The rational account of medicine

Pellegrino and Thomasma pointed out that *phronesis* is an intellectual virtue that rests on reason, and which can be taught.[14] *Phronesis* integrates *episteme*. This accords well with the Hippocratic concept of *téchnê*. The Hippocratic author of *On the art* argues that it is medicine's rational account that makes it a *téchnê*, and which differentiates it from religious speculations. *Téchnê* and *episteme* were synonymous concepts [43], and *technê* was closely related to both *logos* and *episteme* ([44], p. 49].

This shows that *technê* had a theoretical and rational provenance. Medicine is actually dealing with 'universal' and 'necessary' things. Even Aristotle seems to agree on this: "But the best detailed treatment will be given by the doctor…who has a general knowledge of what is good for all cases, or for a specific type; because the sciences not only are said to be but are concerned with common facts." ([17], 1180b14–16, 1141b24–27).

Medicine as a practical activity

The main objective of Pellegrino and Thomasma has been to found a philosophy of medicine in medical practice. However, *téchnê* appears to have been a practical activity. *Technê iatrikê* was man's skilful contribution to the removal of the disturbing causes of disease. With the knowledge of the history of disease (anamnesis) and the present state (diagnosis) the physician was to predict the course of disease (prognosis) and to know the right time of treatment (*kairos*)[15].

The author of *On the art* argues that the proof that medicine is a *technê* is given by its practice. The results of its activity, rather than its argumentation, were what counted ([36, p. 103]. It was its practical product (*ergon*), health, which granted its epistemological status. Medicine was a *technê* in its capacity of doing, and the limits of this doing were related to the practical limits of *technê* itself ([50], [36], p. 106). Theory certainly had its limitations and was only relevant in relation to practice. It was the correct action that made medicine a *technê* and allowed it to triumph over accident (*tuche*). It was not possible to know what to do only from theory, the physician had to see the particular case (*On the sacred disease*: V). The relevance of the general knowledge was dependent on the particular patient ([36], pp. 108–109).[16] Hence medicine, as a Hippocratic *téchnê*, is a practical activity aimed at healing the particular patient.

[14]Other neo-Aristotelians appear to reject, at least partly, that phronesis can be taught [20, 42].

[15]*Kairos* is in relation to medical topics normally translated with *exact* or *critical time* ([45], [46], [47], see also [48], p. 230, [36], p. 109, [49], p. 121).

[16]The empirical attitude of the Hippocratic authors was displayed by the case studies in e.g. *Epidemics* (I and III). They gave a minute account of the treatment of wounds and of the development of dietetics for athletes. *On ancient art* rejected the importance of measurement and exact standards. There was only one method: sensation. Medical knowledge was based on practice.

The end of medical action

Pellegrino and Thomasma also point out that *phronesis* provides a grasp of the end – the good – of the physician's action. What made medicine a practical activity was its *telos*. The *telos* of medicine "takes it out of the realm of *theoria* and puts it into the realm of *praxis*." ([11, p. 25). The end of medicine makes us attain truth for the sake of action, and its goal is the relief of perceived body disruption. As argued, this concept of the end of medicine is also conceived of as the end of the professional. However, elsewhere Pellegrino argues that the *telos* of medicine is its healing act ([8], p. 47), and that the *telos* is related to the patient's value choices ([9], p. 181), and, as argued, the end of the medical action was something different from the act itself. This concurs brilliantly with the Hippocratic concept of the end of medicine. The end of Hippocratic medicine was to heal and help the patient [51, 52, 53].

The author of *On the art* argues that *téchnê iatriké* "is to do away with the sufferings of the sick, [and] to lessen the violence of their diseases" [54]. Without this goal, medicine would not be a legitimate activity. The purpose of the physician was to re-establish bodily order, that is health and strength [55, 56]. However, the end of medicine was not only the patients and their bodies in general. Its aim was to fulfil the needs of a particular patient [57], and to take into account the particular situation [58]. It was medicine's concern for the sufferings of the individual person that made it a *téchnê* ([24, p. 543). Hence, according to the Hippocratic authors, medicine appears to be an activity that has an end different from the activity itself, that is to heal and help the particular patient. It is supposed to also be able to act on behalf of general knowledge, and to give a rational account of its activity. Furthermore, as a practical activity that applies general knowledge in unique cases, medicine has to acknowledge its limitations.

The normativity of medicine

The objective of Pellegrino and Thomasma is to find a moral basis for medicine in medical practice. How then, does the Hippocratic concept of *téchnê*, which has here been investigated briefly against the background of Pellegrino and Thomasma's conception of *phronesis*, address normative issues in medicine? To a large extent it addresses Pellegrino and Thomasma's demand for a practical and "teleologic" based ethics. The end of the "technical" action is to heal and help the particular patient. This end legitimates medical theory, as well as medical practice. The difference from Pellegrino and Thomasma's theory is that the Hippocratic *téchnê* was not based on the concept of *phronesis*, it did not relate to particular virtues, and it did not depend on a moral community of professionals.[17]

Conclusion

Medicine certainly is not only about medical science and physical results. It is also about practice and conduct. The conductive aspect of medicine seems widely neglected, and can find inspiration in both ancient and modern virtue ethics. This paper has investigated the philosophy of Pellegrino and Thomasma, and their concept of *phronesis* in particular. The objective of Pellegrino and Thomasma is to find a moral basis for medicine in medical practice. Some difficulties with this have been discussed, in particular in relation to the crucial moral community of

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[17] It might be argued, as Edelstein does, that the effect of *The Oath* depended on a common attitude among the professionals. However, as Edelstein points out, this "community" was established not by ethical, but by economic motives.

professionals. It has also been argued that the characteristics of *phronesis*, as described by Pellegrino and Thomasma, to a large extent correspond to the Hippocratic concept of *téchnê*. It seems that this concept of *téchnê* also addresses many of the epistemic, ethical and practical issues that Pellegrino and Thomasma aim to handle. It also appears to be better tuned to addressing the challenges of technology in medicine. Although a different route of analysis has been followed, the conclusion parallels that of Beresford: *phronesis* cannot save the life of medical ethics [21]. However, it might be claimed that the truly virtuous physician is the one who acts according to *téchnê*, that is, as a *technites*.

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