The Art of E-Care

Virtuous Care Work, Skills, and Information Technology

Mark Coeckelbergh

Introduction

Contemporary health care relies on electronic information and communication technologies (ICTs): electronic devices for prevention, diagnosis, and treatment. Consider use of personal computers, the use of the internet to acquire health information, electronic prescribing, medical expert systems, medical imaging technologies, chip implants, care robots and robots in surgery, mobile devices that enable monitoring and sharing of health information, and electronic patient records. Some of these technologies are used for so-called “telemedicine” and “telecare”: care givers and care receivers are no longer in the same location, but communicate and exchange information via ICTs. For example, telemonitoring devices enable chronically ill people or elderly to stay at home while their medical condition is monitored by nurses and other care workers at a different location.

The use of these electronic technologies has advantages, but also raises ethical worries. Consider for example safety and privacy issues. Is it safe for patients and care workers to interact with care robots? Do electronic patient records and mobile devices that monitor health respect the privacy of patients? How reliable is this “e-health” and this ”cybermedicine”, given that there can always be computer errors and that computers can be hacked? However, in this paper I am concerned with a deeper ethical issue: the problem is not only how these devices are used, but also how they change health care practices and how they change our thinking about health care. Influenced by contemporary philosophy of technology, I will assume in this paper that health care technologies and medical technologies are never mere ‘tools’, are never ethically neutral, but change the perception of patients and their problems, change how patients are treated, and in the end change the entire practice. In particular, I will use the concept of “craftsmanship” and “skill” to identify and articulate problems with the quality of e-care work, considered both in relation to the care receiver (patient) and in relation to the care workers (physicians, nurses, and others). I will focus on the worry that information technologies alienate the care worker/care giver from the patient/care receiver and from other care workers, rendering the care practice more impersonal and less virtuous. In particular, I will ask if e-care jeopardises skilful engagement and care “craftsmanship”. Can care craftsmanship be realized in the “electronic” age?

A comprehensive discussion of this question requires more work. Here I will start with offering a conceptual account of the care worker as craftsman and with exploring what this means...
in the case of e-care.

First I will articulate the view that the quality of a practice and the virtue of its practitioners depends on skillful and careful engagement with the world and with others. Then I will explore what this moral epistemology implies for health care practices mediated by information technologies. What does care “craftsmanship” mean, and is it still possible in the age of “cybermedicine” and e-care? Is e-care disembodied and impersonal care? Does physical distance also necessarily create moral distance?

**Good Work: Know-How, Skilled Engagement, and Virtue**

Let me start with clarifying what good work is and how it relates to virtue by offering my interpretation of Sennett. Sennett’s work on craftsmanship suggests that virtuous work is skilled work that involves physical and bodily engagement with things. In *The Craftsman* (2008) he gives many examples of craftsmanship, ranging from cooking to medicine and music. What matters to the quality of the work is physical, bodily practice (Sennett, 2008, 10), which gives us tactile experience and relational understanding. Expertise means having ‘tacit knowledge’ (50). Those who have this kind of knowledge do good work. But “good” should be understood not only in a technical sense, but also in an ethical sense. Skilled work, Sennett argues, produces excellence or virtue (*arête*) since it is ‘quality-driven’ (24). It is intrinsically motivating and helps us to develop our personality, for example we become more patient (220), learn from resistance, and learn to improvise. Thus, the craftsman becomes a virtuous person in and by his work. Moreover, since Aristotle virtue is also understood to have an important social dimension. You can only develop into a virtuous person within a community. Sennett tells us that the workshop of the craftsman is a social space (73). Skilled work promotes a good form of working together and contributes to community building and the growth of solidarity. It turns out that skilled manual work is not only a way to avoid alienation from the world, it also helps us to avoid alienation from others. Sennett writes that the medieval guild forged a strong sense of community, had rituals, fraternities that helped workers in need (60). The workplace was a ‘surrogate family’ (63).

Sennett’s suggestions about the relation between virtue and craftsmanship support the view that what matters to the quality of work and, more generally, to the quality of life and character, is not only and not mainly theoretical knowledge but especially practical knowledge. In other words, good work and good life requires knowing-how to work and knowing-how to live (with others). It requires intense engagement with things and with people. Let me develop this point by using philosophical arguments about the value of skilled engagement.

In *Human Nature and Conduct*, Dewey makes a distinction between knowing how and know that, and argues that we ‘*know how* by means of our habits’ (Dewey, 1922, 177; Dewey’s emphasis). In the latter case, knowledge is not theoretical but a matter of practical skill and habit. Applied to work, this view means that if we analyse a particular practice, we should not only pay attention to the theoretical knowledge practitioners have, but also study what they do and in particular *their habits*: their customs, the way they do things. Doing good work then means having good habits. Being an excellent practitioner means having excellent know-how. Someone who just knows-that is not an expert. She knows the theory, but she doesn’t know how to work and how to do good work.

Dreyfus and Dreyfus have argued that expertise is a matter of skill acquisition rather than knowing-that (Dreyfus and Dreyfus, 1991). This is also true for moral expertise. You cannot become a virtuous person by studying ethical rules and principles. Real virtue means knowing *how* to do things well: it means developing good skills and habits. Increasing moral knowledge is a matter of developing practical know-how. This does not mean that rules are useless. With their five-
stage model of skill acquisition, Dreyfus and Dreyfus (1980) have argued that novices need such rules. However, they show that experts transcend reliance on rules and guidelines; they have an intuitive grasp of the situation, a tacit understanding of the practice. This enables them to improvise in new situations. Experts have not only theoretical knowledge but also and especially what Aristotle called practical wisdom, *phronesis*.

This view is also supported by a current in cognitive science which emphasizes embodied knowledge. Based on his earlier work in cognitive science (Varela *et al.*, 1991), but also on Dewey and on Eastern thought (Confucianism, Taoism, and Buddhism), Varela has argued that ethical expertise is a matter of know-how: to do what is ethical is not a matter of following abstract rules, but a ‘savoir faire’, a practical coping and development of habits. (Varela, 1999).

Good work also means knowing how to deal with things and knowing how to *care* for them. Dreyfus and Kelly argue that by engaging in skilled activities, we can learn to care for things rather than treating them as ‘a mere resource’ (Dreyfus and Kelly, 2011, 217) – something Heidegger warned for in his later work (see for example Heidegger, 1977). Again the craftsman’s understanding is a tacit, intuitive one, based on practical experience. The authors write about the craftsman who sees how the wood ‘will respond to an axe’ (Dreyfus and Kelly, 2011, 208). They say that the wheelwright achieved ‘intimacy’ with the material and respects it (210).

Borgmann has also stressed the value of skilled engagement with things, but in addition points to the social and character benefits. He writes that skill is ‘bound up with social engagement. It molds the person and gives the person character.’ (Borgmann, 1984, 42) Thus, skillful and careful engagement with the world is linked to better engagement with people and to becoming a better person. Borgmann gives the example of what he calls “focal practices” such as gathering around a stove or drinking wine together. He claims that modern technology, by contrast, implies de-skilling: ‘The machinery makes no demands on our skill, strength, or attention, and it is less demanding the less it makes its presence felt.’ (Borgmann, 1984, 42). This seems also applicable to contemporary information and communication technologies. In his critique of the internet (Dreyfus, 2001), Dreyfus has argued that the internet disembodies us and prevents engagement, risk-taking, and commitment. The internet makes everything ‘easily accessible and optimizable’ (Dreyfus, 2001, 1-2). One could also add that the internet threatens the social, since it does not promote direct engagement with others.

But is this true? If we accept the view that skilled engagement with things and with others is a necessary condition for good work, good living, good living together, and good character (virtue), then it may seem that contemporary information and communication technologies are indeed problematic, since they appear to discourage direct, practical and physical engagement with the world and with others. But is this unavoidable, or can we (nevertheless) develop a kind of “craftsmanship” in practices mediated by these new technologies and media?

In this paper, I will not answer this general question (concerning *all* practices) but limit my inquiry to an exploration of the problem in the domain of e-care. Is good work in health care – that is, care craftsmanship – jeopardized by the use of electronic technologies? In order to answer this question, we first need to know what “care craftsmanship” means. Let me articulate a notion of *care work as craftsmanship*.

**Care Work as Craftsmanship**

Of course theoretical knowledge is important in medicine and health care. The student and trainee learns about diseases, about studies, about “cases”. But if and in so far this is the dominant approach to care work education, then something vital is missing. Care work also involves skilled, physical, and bodily engagement with people and with things. The worker’s physical, bodily
practice gives her tactile experience of the patients and their body. For example, in order to make a
diagnosis, a physician (e.g. a general practitioner but also a medical specialist) examines the body
of the patient and talks with her. Vision is often not enough; she will also touch and use medical
instruments. Care work is a physical and material practice. Therefore, the education will always
need to involve practical training: experience is needed. The care worker learns a range of skills that
enable her to work on and with the patient, which also involves working with artefacts. For
example, a nurse learns how to check a patient’s blood pressure, how to wash the patient, and so on.
If she sees the patient in her context, she will also develop a relational understanding of the patient,
for example when she visits the patient at home or when the patient tells her about her life.

Moreover, care work is also quality-driven. For example, a surgeon tries to get better at what
she is doing, she tries to become more skilled. This is motivating; she sees the results of her work.
She also learns to improvise, for example in the context of an intensive care unit when there is little
time to find a solution to a complex problem, or when in a particular setting there is a lack of
medical instruments.

Ideally, care workers learn their skills within a relationship that can be characterized as a
master-apprentice relationship. In so far as care work is a craft, beginning care workers can only
learn the skills from someone who already masters them. Skilled work can only be learned by doing
and by having someone supervise and guide one’s actions. For example, if you want to become a
good cook, you have to work with a chef who is a master. The result of this kind of learning is not
only better ‘purely technical’ skills. The skills are never ‘purely technical’: they are also social at
the same time. One learns to work together in the kitchen. One learns to work together in the
operation room and in the team. Medical and health care craftsmanship also fosters the building of a
community of care workers. Their community is firmly based on the know-how they have
developed, on the craft which they have come to embody.

Good care work, then, is a matter of developing good habits and skills. And when moral
problems arise, they will arise not in the books but in the context of the practice. In order to cope
with them, teachers can provide care workers with knowledge of ethical theory and principles. But
what they need to become care experts, is an intuitive grasp of situations and moral imagination.
Such imagination cannot be instructed, but needs to grow within the practice. Physicians and nurses
need both medical and moral imagination, and the two cannot and should not be separated. To do
the right thing and to become excellent is not about applying abstract principles, but about
becoming excellent as care workers, that is, becoming excellent as care craftsmen. Ethics should
not be understood as something external that is or should be imposed on the practice; this usually
does not work and is rightly resisted by professionals of all sorts. The marriage of moral and
professional excellence is an *internal* matter: developing moral and professional skills is internal to
developing oneself as a (care) worker.

Of course this is the ideal, or rather, the end-stage of professional and moral development.
Before any care giver is an expert, she has to go through a number of stages which can be usefully
articulated by using Dreyfus’s five-stage model of skill acquisition. First apprentices need explicit
instruction and rules. But when they are more competent, they can take distance from these rules.
As they become more competent, that is, as they develop the right skills and habits, they develop a
kind of intuitive, non-reflective understanding of the practice and of the patient. When they
encounter a patient, they no longer need explicit theoretical knowledge but have an intuitive grasp
of the problem. When they are experts, this ‘tacit knowledge’ enables them to improvise in new
situations, in situations that cannot be found in the books and that have not been described by their
teachers. They have a ‘savoir faire’, they know how to do things, and when they struggle to cope
with a new problem, they have the skill to cope with the new situation.

The work of Benner supports this interpretation of the practice. She has studied nursing in
order to test if Dreyfus’s model of skill acquisition is applicable to that kind of care work. She
interviewed what we could call ‘expert’ nurses. Based on their narrative accounts of actual clinical
situations, she concludes that Dreyfus’s model is indeed useful. She found that the development of
expertise is linked to the development of skills *and* of moral agency (Benner, 2004). She therefore
recommends that the education of nurses aims at this kind of practical knowledge. She especially emphasizes that nursing is an interpretative and imaginative practice. She uses the term ‘clinical imagination’:

‘Clinical imagination is required for students to grasp the nature of patient’s needs as they change over time. Likewise, narrative understanding and interpretation of clinical situations help to enrich the student’s clinical imagination and reasoning about changes in the patient’s condition over time. Situated learning is also vital.’ (Benner, 2010, 86)

Her view is also in line with the view that moral excellence or virtue is something that is directly connected to professional excellence, to what we may call the care worker’s craftsmanship. Benner writes that becoming a nurse is a matter of ‘formation’ (86).

Such a formation always has a social dimension. Perhaps we could call good medical care and good health care a ‘focal practice’. As care workers gather around a patient – literally and figuratively – they do not only intensely engage with that person and her problems; they also develop social ties with the other care workers and help one another to become better. They become a community of excellence – as professionals and as persons.

Of course this conception of care work as craftsmanship is an ideal. In practice, it may be difficult to attain such high levels of expertise. This raises the question: what are the barriers to excellent care work?

One barrier is certainly our modern way of organizing medicine and health care. For example, ‘delivering’ care in large care factories does not seem conducive to the development of the kind of excellence we would want. If patients and care workers are always changing and have too little time to get to know one another, for instance, then it seems that it becomes difficult for care workers to intensely engage with patients and develop a tactile understanding of their particular needs, or it becomes difficult to learn within an apprentice-master setting. If your patient and your ‘master’ change frequently, there is little time for the kind of practical-relational development we want. There is also little room for the development of a community of care workers.

Furthermore, due to a high degree of labour specialization, which is typical for modern practices, the integration that seems to be required for craftsmanship is eroded if not destroyed. In earlier times, when a master made something (say a chair), he had help from his apprentices, but he would have guided the whole process and retained an overview. He was also considered to be irreplaceable and unique. Of course he tried to pass on his skills, but if he died everyone would have recognized that something was lost – some of the excellence was lost because it was tied up with the person. In modern times, workers have ‘roles’ and are considered to be replaceable. Skills are seen as entirely impersonal. The workers do not have an overview, each of the workers works on a particular part of the process. This is also the case in medicine and health care, especially in modern institutions. In a sense, both the care giver and the care receiver are ‘cut into pieces’. There are specialists for each part of the body. No-one has the overview. There is no integration. Moreover, as Sennett has argued in The Corrosion of Character (1998), conditions created by contemporary capitalism even worsen the situation. For example, flexible labour that renders people disposable does not only threaten the quality of the work and destroys trust and the feeling of community, but also diminishes possibilities for personal development, personal virtue, and personal commitment (Sennett, 1998). It therefore directly threatens the development of care craftsmanship.

In addition, since the modern approach to work and ethics is mainly aimed at developing and imposing rules, it appears that there is less room for developing clinical and moral imagination, since “ethics” is imposed on the practice from the outside. If “ethics” is experienced as something external to the practice, it is a knowing-that rather than a knowing-how; it is disconnected from the care worker’s personal experience and personal development. The worker may follow the rules and the protocols, but is not encouraged to care about becoming a better practitioner and a better person. (This is especially problematic in so-called “evidence-based medicine”. However, I will not further discuss this here.)

Finally, it seems that modern technology disengages care workers from their patients, from materiality, and from each other. Let me further discuss the latter suggestion and return to my main
As said in my introduction, contemporary medicine and health care involves the use of many electronic devices. If we endorse the craftsmanship conception of good care and good care work, we must raise the question if these technologies support care craftsmanship and care excellence (virtue).

On the one hand, it seems that we have good reasons to worry. Contemporary information and communication technologies seem to discourage intense, physical, material, and social engagement. There is a risk that doctors spend more time engaging with their PC than with patients. Time for social and physical contact is very limited. If patients use the Internet to acquire health information, they miss the expertise and skills of the physician who would examine them and rely on their visual and tactile, embodied understanding, their know-how. If a medical ‘expert’ system is used, it is assumed that expertise can be formalized. If patients are sent to the scanner, it seems that touch is missing: the patient is “represented”. If care robots are used, it appears that they can never develop the kind of ‘tacit knowledge’ human doctors and nurses have. If health information is stored in the form of an electronic record, that kind of personal, practical, and tacit knowledge is also missing. It appears that there are only numbers, there are “data”. In other words, it seems that in cybermedicine and e-care there is much knowing-that, but little knowing-how.

Telecare poses a particular ethical challenge with respect to skilled engagement and with regard to what we may call ‘clinical craftsmanship’. How can care workers develop good medical skills and nursing skills, if ICTs increase the distance between them and the patient? If care givers and care receivers communicate via a screen, how can tactile experience develop? How can a proper relational understanding of the patients and her problems emerge if the patient or the doctor is not present and if there is only an exchange of data? How can physicians get a grasp of the situation if they approach the patient via a robot, in the hospital room or in the operation room? How can rich social interaction take place if electronic devices ‘take over’? At first sight, it appears that telecare does not enable care givers to acquire the right kind of knowledge (know-how, skilled knowledge) in order to provide good care and to be become care craftsmen.

In the literature on telecare and telemedicine we find similar worries. Both care workers and ethicists fear that patients are neglected and that personal relations cannot develop between care givers and care receivers. They are afraid that telecare becomes ‘cold’, impersonal care. For example, in his article on ‘cybermedicine’ (the author includes telemedicine, electronic patient records, and the use of telephone), Bauer wonders if such medicine establishes trusting and morally appropriate physician-patient relationships. He is worried that it discourages patients and physicians to take psychological and emotional risk and to make commitments to each other (Bauer, 2004). (Note that, like Dreyfus’s critique of the internet, this argument is also based on Kierkegaard.) And Onor and Misan argue about videoconferencing (and more generally, telemedicine) that it involves a very different kind of doctor-patient relationship. Whereas in classical medical consultation doctor and patient face each other in the same room and have direct and ‘human’ contact, it seems that videoconferencing involves indirect interaction, via a ‘technological system’, which – so they claim – reduces personal contact (Onor and Misan, 2005).

On the other hand, it is not clear that telecare and, more generally, care work mediated by contemporary ICTs, necessarily reduces the conditions under which skilled engagement and craftsmanship can develop. How disembodied, disengaging, and impersonal are relations between care givers and care receivers really when ICTs are used, for example in telemedicine and telecare? To begin with, it must be noted that care practices were always technological: they always involved
dealings with artifacts, with materiality. The medical craftsperson and the master-nurse act in ways that do not exclude technology, but instead use it. Their skills to treat patients are skills that relate to communication with patients and engagement with their bodies, but also to using all kinds of things. They learn how to use artefacts. Technology has always mediated care practices. Furthermore, using ICTs does not necessarily mean that the ‘old’ know-how is redundant or is being replaced. Often telecare is used in combination with ‘old’ forms of interaction and care. And even if new forms of medicine and care develop, then it is questionable if they imply de-skilling. Instead, it seems that care workers develop new skills. They learn how to use the equipment and how to communicate with the patient in such a way that the quality of care is maintained or enhanced. There is distance, maybe, but physical distance is not necessarily distance in terms of personal contact or skills. Perhaps there is room for a new kind of craftsmanship, for an “art of e-care”.

In the literature we can find work that supports this more optimistic view of e-care, for example in discussion of telecare that rely on empirical research. In the Netherlands, Pols argues that if one studies actual practices of telecare, the worry that care becomes colder and that there is less human contact is not warranted. Based on ethnographic studies of nurses and patients involved in telecare, she even argues that telecare makes care more intensive since there is more contact between patients and professionals (Pols, 2012). In an article (Pols, 2010) she describes how patients use a monitoring device for heart failure, which sends data to nurses, who can monitor the numbers. She reports all kinds of new challenges, but also shows that although the nurses did not have face-to-face contact with their patients, they used strategies ‘to compensate for absent senses’. She also writes that when webcams were used, the conversation was ‘even closer than real encounters’ since the webcam was located in the home and the nurses focused on ‘the image of the face of the other’ (Pols, 2010, 385). Not everything could be seen, but there were more frequent consultations. This ‘made patients and nurses (feel) closer to one another.’ (385) Furthermore, it is doubtful if telecare amounts to disembodied work. Based on an ethnographic study of English telecare monitoring centres, Roberts et al. argue that telecare is not disembodied but involves the use of voice. It also relies on ‘social networks and the availability of hands-on care’. They conclude that telecare is not a substitute for hands-on care but ‘at its best interwoven with it’ (Roberts et al., 2012). Essén also stresses that in telecare technology plays a role as a complement rather than as a replacement of the workers (Essén, 2008). This kind of care is also not necessarily less cold. Based on empirical studies of a telehealth project, Essén argues in her dissertation that humans integrate technology with their sensory and emotional capacities. Rather than rendering the care less ‘human’, it turned out that the technology made people feel more safe, more cared for, and less isolated. (Essén, 2008). Moreover, the way care workers cope with the demands of their work is often in tension with bureaucratic rules and requirements based on economic rationality and cost-efficiency: Yakhlef and Essén suggest that these bureaucratic rules and requirements are alienating, rather than the technology (Yakhlef and Essén, 2012). And in their discussion of telemonitoring devices (in particular the Myotel system), Kiran and Verbeek draw attention to how people trust themselves to the device and emphasize that this trusting oneself to technology has an active character: ‘It is not necessarily a blind surrender to technology; people can actively shape their subjectivity in interaction with the impacts of the Myotel system. (…) In such a way, they take responsibility for the ways in which they are affected by the technology.’ (Kiran and Verbeek, 2010, 423). Thus, in this discussion about telecare one should not construct patients as passive receivers of care and technology; they are also active subjects and co-shape how the technology impacts them.

Although this body of work does not directly address the issue of care craftsmanship, it questions a one-sided rejection of contemporary care practices mediated by ICTs as necessarily implying disengaged and disembodied work. It turns out that under appropriate conditions both care givers and care receivers might develop skills to cope with the new situation in a way that maintains or even enhances the quality of care. In this sense, e-care does not necessarily mean the end of care craftsmanship.

What is needed, then, is a more refined analysis of these “appropriate conditions”, which
attends, among other things, to the relations between what happens in concrete e-care practices and the wider, social-organizational context that shapes and is shaped by these practices.

**Conclusion**

In this paper I have discussed the worry that e-care does not promote skillful and careful engagement with patients and hence is not conducive to the quality of care – and to the virtues of the care worker. Using the work of Sennett and others, I have first articulated the concept of good work as craftsmanship and I have explored what it means to understand medicine and health care as “craftsmanship”. This involved making a crucial distinction between two kinds of knowledge that play a role in medicine and health care: knowing-that and knowing-how. I have argued that good care, that is, care as craftsmanship, cannot do without the latter kind of knowledge: it crucially involves know-how and skilled engagement with patients, with other care workers, and with things. I have also emphasized that there is an intrinsic link between skilled engagement and virtue: the care expert is also a moral expert, who uses her intuitive grasp of the situation and her clinical, practical imagination to cope with problems. Then I asked the question whether today this craftsmanship is eroded. I have argued that this is a real danger, especially under modern conditions, but that whether it happens (and the extent to which it happens) depends on whether in a specific practice and given a specific technology e-carers can develop the know-how and skill to engage more intensely with those under their care. Drawing on ethnographic studies, I have indicated some reasons why we need not be too pessimistic about this. We can conclude that what matters to virtuous care work is how care givers work and care – with technology and with others.

In order to further develop this analysis, we need a better understanding of the precise inter-relations between care craftsmanship, e-care technologies, and their social-organizational contexts. This requires more integration between, on the one hand, conceptual-philosophical work and, on the other hand, studies of actual care practices and their contexts, which attend to the material and social dimensions of health care. If we want to reveal and discuss the barriers and possibilities for good work in contemporary health care in greater detail and in a way that is directly relevant to practitioners, we need more transdisciplinary work. Moreover, a transdisciplinary approach is also recommendable since the electronic technologies under discussion should not be regarded as “given”: the development and use of technologies are also influenced by practices and by society, and can be changed – at least to some extent. If we want to support craftsmanship in e-care, what kind of technologies do we need and how should we (re-)organize care? How can and does “the art of e-care” contribute to changes in the design and use of e-care technologies? The normative concerns and conceptual framework articulated in this paper invite us not only to further reflect on what “craftsmanship” means in e-care, but also to ask how both social structures and technologies in health care may be re-shaped in ways that effectively support e-care craftsmanship.

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