

Professional Practice and Ethics

Questions and Marking Scheme - Richard C. Jennings

Computer Science Tripos 2005

Part IA - Exam Paper 2

Marking Scheme for 20-mark question on Professional Practice and Ethics

A. What is the defining characteristic of consequentialist theories in ethics? How can consequentialist theories differ? Identify at least two problems with consequentialist theories. (4 points)

This is answered in section IV of "Ethics - An Introduction," the introductory part of the course notes:

IV. Consequentialist Theories

Consequentialist theories are theories that determine moral values on the basis of their consequences. But the consequences are not confined to consequences for oneself, they include consequences for everyone.

A. Utilitarian Theories and others

According to utilitarian theories we ought to do things which maximize pleasure or happiness for everyone, or, at least we should not interfere with people doing what gives them pleasure as long as it does not detract from the pleasure of others. A problem with this view is that not everyone makes pleasure or happiness their major goal. A more sophisticated version would aim to maximize satisfaction of preferences. But, even so, some people's preferences are not in their long term interests - children's food preferences, or drug addicts' preferences, for example.

B. Problems with Consequentialist Theories

There are a number of problems with consequentialist theories. First is the need to justify the basic claim that we ought to maximize pleasure (or happiness, or satisfaction of preferences). Second, there are real practical difficulties in quantifying happiness (or whatever). Third, there is no end to moral considerations - since every act has consequences, everything we do needs to be considered from a moral point of view. Fourth, such theories can lead us to treating certain individuals very badly if the total happiness is greater than their unhappiness.

B. Give at least three functions of professional organizations and say why these functions are managed by the professional organization (rather than some other organization such as the government or universities). (6 points)

In lectures I emphasized that (a) education and/or the transmission of skills and (b) quality control and the maintenance of high standards were essential functions of professional organizations because only practicing professionals had the knowledge and skill needed to educate newcomers and judge the quality of professional work. This is not emphasized in the course notes. I also covered the

egoism was
not allowed as a
kind of consequentialism
nor was the
size of the group
(family, friends, etc.)
allowed.

did not allow
"holding reputation
of profession" unless
it was explained how
this is to be done.

topics in Part I of the course notes which include maintaining professional relationships. These include those with (c) employers and employees, with (d) clients, and those with (e) other professionals – justified on the grounds that they maintain the good reputation of the profession; and those with (f) the public in general - on the grounds of social responsibility. However I think that at least one of (a) or (b) must be included or the marks for one function (and the reason it is a professional matter) will be lost.

C. Name two possible health problems that may arise in the IT industry and how they can be averted. (4 points)

This again is not included in the course notes, but was emphasized in lectures when I discussed employer/employee relationships. The lecture notes that I used are as follows:

We have all heard about RSI - repetitive strain injury. This includes a variety of disorders called upper limb disorders (part of the general problem of musculoskeletal disorders - MSDs) found among those whose working day involves considerable use of a keyboard. These are the result of long spells of sitting and working at a desk where, because of the positioning of the display screen (or Visual Display Unit, VDU), the keyboard and the mouse, the employee does not change his position. In addition to MSDs, constant use of a VDU can result in problems with vision, and the use of computer software can often result in stress. So far, there is little evidence that work with VDUs can cause disease or permanent damage to the eyes, but it can result in eyestrain - tired eyes or headache - and can also lead to awareness of already existing eye defects such as short-sightedness. Stress can be found in any office work - resulting from the demands of deadlines, for example - but further stress can result from computer work when the system is not well understood, or is not working well.

The solution to many problems, especially musculoskeletal disorders, is to provide an adequate work station. Various factors work together. There must be enough space in the work space for reasonable movement of the legs and body. The desktop should easily accommodate the mouse, keyboard and VDU. The levels of the keyboard, mouse and VDU must be such that good posture is maintained. the keyboard and mouse should be located so that, when using them, the arms are relaxed and the wrists are straight. The VDU should be viewed straight on. If working is to be done from document to screen, a document holder should be in place close to the screen. The chair should be adjustable for different size employees to ensure good posture.

With regard to vision problems, it should be possible to move the VDU back and forth to achieve an optimal distance, and the position of the VDU, or other lighting, should be such that there is no glare from other lights and no reflection of other light from the screen. Employees should not be expected to work continuously in front of a screen, they should be given breaks, or there should be other activities they can do which do not involve screen work. Frequent short breaks are better than longer breaks less often. Moreover, under The Health and Safety (Display Screen Equipment) Regulations 1992 the employer should provide eye tests on request.

job stress was allowed along with strategies for avoiding stress. Also lack of exercise - its problems were allowed. Back strain/problems also allowed.

D. Give one good reason why it is (or why it is *not*) reasonable to require members of a professional body to report back to the professional body significant violations of professional conduct on the part of another member. (1 point)

This is open-ended - any good reason for or against reporting on other members is worth a point.

E. In addition to technical measures (passwords, encryption, etc.) what more do organizations have to do to maintain information security? (2 points)

This is included in the last paragraph of Part II of the course notes:

Whatever attitudes and laws might be in place to guard against computer cracking, there will still be those who find it a challenge, and others who can use the craft of cracking as the basis for criminal activity. For this reason technical security - passwords, encryption, etc. - will be needed to protect sensitive information. But such security will have no value if institutional safeguards are not in place. There are two aspects of institutional safeguarding that require attention. The first is the institutional structure - There should be clear rules about who has access to what information and the responsibility for access should be well defined. The second is institutional control - once the institutional structure is in place it should be adhered to, those with access to sensitive information should know what their responsibilities are and should take care that the security of the system is not compromised through negligence on their part.

One point each for institutional structure and institutional control, either specifically named or adequately described.

F. Under the Data Protection Act are your rights violated if an organization (e.g., your college) gains access to your email, prints it out and distributes it to members of staff? (1 point)

Yes.

G. What two kinds of law are used to provide intellectual property protection for software? (2 points)

Copyright Law and Patent Law.

The complete set of course notes can be found at:

<http://www.cl.cam.ac.uk/Teaching/current/PPEthics/ho-all.pdf>

Allowed keeping terminals in secure areas for one point.