Behavior and Ethics E-Business

ICT Workers and Professional Spirit in the E-Business Era

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Abstract

Because of the ubiquity of information and communication technology (ICT) and ICT-based information systems, ICT workers in business organisations have power, both intentional and unintentional, over people’s quality of life. On this point, all of them, not only ICT professionals but also non-professionals or end-users, need to accept responsibility to the public and have professional spirit in order to make and keep the information society and eBusiness environment safe and reliable. However, an individual ICT worker is not necessarily a strong existence; he or she is in a complex situation filled with stress and pressure and his or her decisions are sometimes affected by it. Therefore, social and organisational measures to prompt ICT workers to behave in professional spirit are necessary to be taken.

Key words

ICT worker; professional spirit; eBusiness environment; moral working environment

In First World society, information and communication technology (ICT) has become a ubiquitous technology and an enabler of various individual and organisational activities. It may be no exaggeration nowadays to say that the quality of our home, working and social life is significantly dependent on the quality of ICT-based information systems supporting our life. Development of quality information systems and reliable operation of them is essential to keep our society and the eBusiness environment safe and reliable. In this regard, ICT workers, not only ICT professionals but also non-professionals or end-users, in business organisations have social responsibility because majority of ICT and ICT-based information systems are developed and used in business organisations.

Simultaneously, however, the dependence of society upon ICT and ICT-based information systems means that defects and malfunction of ICT-based information systems and abuse of them may cause a serious, sometimes catastrophic, situation. In fact, errors included in software codes of the Therac-25 medical electron accelerator caused the worst series of radiation accidents and resulted in death of several people and injury of many[1]. Malicious or negligent development and utilisation of ICT and ICT-based information systems has brought a number of incidents, or apprehensions of incidents, in which human rights are infringed and human values are deteriorated. On this point, the ICT-dependent society is ethically vulnerable, and this would cast a dark shadow over business organisations in the eBusiness environment, because, in the first place, business should primarily be conducted in reliable and trustworthy environment and, in the second place, this sort of incidents can raise accusation against and do serious mischief to trustworthiness and reputation of business organisations that are concerned in the incidents.

Issues and problems related to the vulnerability have been studied in the research area “computer ethics” or “information ethics”. Though this interdisciplinary area has covered a variety of subjects, Gotterbarn states that computer ethics doesn’t seem to have a clear domain and the only way to make sense of computer ethics is to narrow its focus to those actions that are within the control of the individual moral
computer professional or builder of computer artefacts\(^2\). Establishing the concept of ICT profession and the scheme of moral behaviour of ICT professionals is indeed important for eBusiness as well as the information society since their value judgment is embedded in hardware, software and information systems they develop. These artefacts underpin the society and the business environment and, therefore, ICT professionals have power over a wide range of people and societies. Preparation of code of ICT professional conduct and permeation of it among ICT professionals is significant in this regard.

However, in order to make and keep the information society and the eBusiness environment well ordered and reliable it is not sufficient to prompt ICT professionals as independent existences to behave morally. We cannot ignore the facts that 1) the majority of ICT professionals work for business organisations, 2) there are a lot of ICT non-professionals or end-users in workplaces who utilise ICT-based information systems autonomously to a certain extent, and 3) it is not easy to draw a clear distinction between ICT professionals and non-professionals. These imply that organisational and social measures that enhance moral behaviour of ICT workers, including ICT professionals and non-professionals, are important and necessary for the information society and the eBusiness environment.

1 Importance of Professional Spirit to ICT Workers

1.1 The Notion of Profession and ICT Professionals

The word profession has various meanings from broad one to narrow one. In academic fields this word is used in a restricted sense, which can be summarised into the following criteria or characteristics\(^3-7\):\(^\)

1) Highly specialised body of knowledge and technique: members of a profession have an advanced, systematic and exclusive body of knowledge and technique acquired through long-term education and training, and continue to derive their raw material from science and learning.

2) Autonomy with responsibility: they apply their knowledge and technique to problems freely and autonomously, and accept large and personal responsibility because of their large discretion.

3) Self-organisation: the social and personal lives of them tend to organise around a professional nucleus, and a professional association or a professional group is organised which sets a definite and practical end and standards for practice and controls the qualifications related to the profession and the membership of it based on its end and responsibility.

4) Public service: they are becoming increasingly altruistic in motivation and look toward public service or fulfilment of the social function of the profession.

Whereas the term ICT professional or computer professional is used in everyday life, many researchers consider that work related to ICT and information systems does not constitute a profession in this sort of restricted sense. For example, Hodges states that what computer specialists and users do with computers is so diverse that the standards of excellence, notions of success and internal rewards are not common to a community of computer specialists, and, therefore, there can be no community of values or agreement on standards of behaviour which are foundations for professional obligations\(^8\).

Also, Linderman and Schiano insist that the field of information technology is not a profession because it does not meet some of the defining conditions to be a profession, e.g., certification standards, agreement on educational requirements and meaningful or enforceable sanction for unprofessional behaviour. The fact that often a chief information officer (CIO) is not from up-thru-the-ranks colleagues and doesn’t have appropriate qualifications and, therefore, priorities are decided by industrial and market interest has created such a situation. Consequently, those who consider themselves to be ICT professionals confront identity problems and a power vacuum, which leads to a responsibility vacuum\(^9\).

1.2 Professional Spirit as Stature of ICT Professionals

Even though work related to ICT and information systems does not compose a profession in the traditional sense, it is not fair to say that approaches to this evolving field from the study on professional
ethics are ineffectual or misleading. Instead, in order to make and keep the information society and the eBusiness environment safe and reliable, it is far more constructive to try to consider how the ICT field comes to fulfil its social role and responsibility and what kind of behaviour of ICT professionals, those who are engaged in development and maintenance of ICT and ICT-based information systems, is desirable referring the rich knowledge yielded in the research of professional ethics.

For example, we can imagine an ICT professional who behaves completely along with some socially accepted code of ICT professional conduct as an ideal type of a moral ICT professional and deduce preferable behaviour of a real-world ICT professional from it with taking a context in which he or she are situated into account. The point the authors want to emphasise here is that real-world ICT professionals should have “professional spirit” which underlies clauses of codes of professional conduct, because any code can neither be exhaustive nor guarantee moral decisions and rapid development of ICT can bring about novel ethical problems one after another.

Professional spirit should contain at least the following elements:

1) Altruism: those who have professional spirit recognise that their work is primarily for public service and their decision-making or judgment is to be led by the public interest.

2) Intellectual modesty: they recognise that quality of their work is dependent on knowledge they have and the quality can be declined by their cognitive limits and obsolescence of their knowledge. This leads their respect for the democratic value and motivates them to learn continuously.

3) Integrity: they accept full responsibility for their work and are honest to themselves and others.

1.3 Necessity of Professional Spirit to ICT Non-Professionals

Today, the large majority of white-collar workers in developed countries are ICT workers and there are more ICT non-professionals or end-users than ICT professionals in offices. What ICT non-professionals mainly do is to process information utilising ICT and ICT-based information systems to do various tasks assigned to them from routine works to knowledge creation. Usually, they are authorised to access to a certain extent of data in databases of their business organisations according to their positions and tasks, have knowledge about ICT and are provided computer facilities from their business organisations enough to process data as they like and to write simple computer programs even though they are called end-users. End-user computing and development is recommended in a number of business organisations since it is considered to enhance productivity of business operations. Drawing a clear distinction between ICT professionals and non-professionals is difficult in the light of their knowledge and business operations.

If ICT professionals could perfectly control all behaviour of ICT non-professionals through providing them with knowledgeably developed ICT and information systems, they would be able to avoid the responsibility of their behaviour related to utilisation of ICT and information systems. But, of course, this is not the case; any artefact is an object of interpretation and, therefore, a developer of it cannot completely control how it is used by others. Additionally, in the eBusiness environment, various data including personal identifiable information (PII) are collected, stored, processed, utilised by and shared among business organisations with utilising ICT-based information systems. Consequently, ICT non-professionals can have power over a wide range of people and societies, and, therefore, they also should have professional spirit in order to make and keep the information society and the eBusiness environment safe and reliable. Flexner’s words are really suggestive:

“ ... But, after all, what matters most is professional spirit. All activities may be prosecuted in the genuine professional spirit. In so far as accepted professions are prosecuted at a mercenary or selfish level, law and medicine are ethically no better than trades. In so far as trades are honestly carried on, they tend to rise toward the professional level. … In the long run, the first, main and indispensable criterion of a profession will be the possession of a professional spirit, …”[4]
2 ICT Workers in Business Organisations

2.1 Constraints on ICT Professionals in Workplaces

Social responsibility of ICT professionals is now significantly heavy and will never be lighter because of their intentional and/or unintentional power\(^\text{[10]}\) over a wide range of people and societies; development and deployment of ICT and information systems transforms society in irreversible fashion\(^\text{[11]}\) and decision-making and value judgment of ICT professionals embedded in ICT and information systems they develop is an invisible deciding factor of the transformation.

However, we cannot ignore the fact that the majority of ICT professionals are working for business organisations, that is, they are in the context of market economy and business. Sometimes, they may be coerced to follow "the logic of business" that results in losing touch with the public interest.

Usually, ICT professionals in workplaces are under two types of constraints, contractual and intellectual. The latter such as limits to cognition and knowledge is a human factor and, therefore, inevitable for both individual and a group of ICT professionals. The former relates to multiple roles an ICT professional in workplaces plays; he or she is required to follow working regulations as an employee, abide by a code of professional conduct as a professional, meet the due date on the budget as a member of a contractor, support a household as a member of a family, and so on.

These constraints often prevent ICT professionals from responding with their professional spirit by making their responsibility and accountability obscure. For instance, the problems of many hands and diehard bugs in software codes, which are typical barriers to accountability of ICT professionals\(^\text{[12]}\), would be avoided if ICT professionals had no cognitive and knowledge limits and could spend time and money without limitation. Multiple roles of ICT professionals can cause conflicts between responsibilities to different stakeholders of ICT professionals which make it difficult for them to keep their responsibility in harmony\(^\text{[5]}\) and may give them an incentive to disregard the democratic value and to make a decision selfishly or based on economic and political power of stakeholders mainly due to time constraints.

2.2 Working Environment of ICT Professionals

The complicated situations related to responsibility and accountability of ICT professionals never lighten their ethical burden. However, their working environment is often highly stressful and physically demanding so as to disturb their professional spirit and affect ICT professionals to take an irresponsible and apathetic attitude.

Actually, in the modern global capitalism, in which investors have relatively stronger power over business organisations than other stakeholders, a significant number of business organisations adopt a personnel policy centred on improvement in productivity of labour and reduction of personnel costs which forces longer working hours and less reward on office workers including ICT professionals. Moreover, their statuses in business organisations are threatened by the employment policy that aims at replacement of full-time employees with contract workers or temps and of experienced ICT professionals with ones fresh from university on the same score.

Ironically, these tendencies have been accelerated since it was recognised that ICT was an integral element of “reengineering” of business processes and its fruit was reduction of personnel costs by redundancy in early 1990’s. Rapid development of ICT, which is described as “dog year”, gives human resource managers a plausible excuse for dismissal of experienced ICT professionals; that is, necessary human resources to the business organisation are those who have knowledge about state-of-the-art ICT.

2.3 Moral Crisis of ICT Workers

A lot of ICT non-professionals in offices are in the similar working environment mentioned above. In fact, they tend to experience longer working hours and less reward including fringe benefit and company pensions more than ever. Length of their service inclines to become shorter and the proportion of contract workers and temps to total workers tends to be larger in order to reduce personnel costs, and, therefore, their organisational as well as social statuses are
getting precarious.

As the phrase “jobless recovery” represents, the working environment of ICT workers, including ICT professionals and non-professionals, can not be improved in the term of business improvement. Managements who push through massive discharge under the pretext of “restructuring” are applauded if it turns a big, even short-term, profit. In these circumstances many ICT workers are compelled to be concerned about their statuses, everyday lives and old age and, accordingly, to give priority to the logic of business over their professional spirit.

It is easy to blame ICT workers who fail to stick to their professional spirit. However, an individual ICT worker is not necessarily a strong existence. It may be very hard to motivate him or her to behave morally with professional spirit or to avoid unprofessional behaviour when he or she is in a workplace filled with the high pressure and stress.

3 Construction of the Moral Working Environment

3.1 Organisational Measures to Construct the Moral Working Environment

In order to make and keep the eBusiness environment safe and reliable, organisational measures to relieve the pressure and stress on ICT workers in their working environment that can induce unprofessional behaviour of them are necessary to be taken besides moral programmes for ICT workers. Managements of business organisations have to understand that the moral working environment, in which ICT workers are prompted to maintain professional spirit in their mind and behave morally, has not only ethical value but also practical or strategic value.

In fact, ICT workers in the moral working environment would contribute to high business performance of their organisations by

1) Their integrity, which can make quality of goods and services they produce higher and more reliable, therefore, can boost trustworthiness and reputation for it of the organisations and can lessen costs of human resource management (HRM),

2) Their concern of the public interest, which can lead their care about a wide range of stakeholders and, therefore, can obviate risks concerning the organisations’ trust and reputation, and

3) Their high motivation for learning, which can facilitate them maintaining high standard of knowledge and can lessen HRM costs such as in-house education costs.

Taking it into account that in the eBusiness environment trustworthiness and reputation of a business organisation are key, but intangible, assets to agile, successful construction of relationships with its business partners and customers, the moral working environment can be quite effective in enhancing business performance of the organisation even in short-term. Additionally, in long-term, a business organisation with the moral working environment would enjoy favourable relationships with its business partners, customers and employees of ability with loyalty to it and remain competitive.

In order to take a lot of pressure on ICT workers off and to make the working environment less stressful, the following measures should be helpful: assurance of income of ICT workers for living expenses including in retirement years, guarantee of their statuses, recruitment of a sufficient quantity of employees, clear presentation of their career path, intrinsic motivation by giving them challenging tasks, manifestation of values of business organisations they work for, and provision of a mental health care scheme for them.

3.2 Social Measures to Support the Moral Working Environment

The moral working environment for ICT workers is favourable for society. Awful working conditions tend to cause fatigue and apathy of workers followed by insensitivity to ethical issues, which leads the wilderness of society. Conversely, reliable, quality goods and services produced by ICT workers with professional spirit contribute toward activating economic activities because development and utilisation of ICT and information systems underpin a wide range of economic activities nowadays. Support
for construction and maintenance of the moral working environment is socially meaningful on this point.

The following measures may be effective to support the moral working environment for ICT workers: the establishment of official certification of ICT workers, the formation of a trade union of ICT workers across business, legislation to protect whistle blowers, and setting up the social safety nets for ICT workers.

4 Conclusions

In the eBusiness era, ICT workers in business organisations have power over people’s quality of life. On this point, all of them, not only ICT professionals but also non-professionals, are responsible to the public and need to behave with professional spirit in order to make and keep the information society and the eBusiness environment safe and reliable.

However, individual ICT workers are not necessarily a strong existence. Their behaviour can be affected stress and pressure they confront in workplaces. Accordingly, organisational as well as social measures to construct the moral working environment in which ICT workers are prompted to maintain professional spirit in their mind are necessary to be taken.

The moral working environment has practical value for business organisations as well as ethical value and is beneficial for the society. This working environment is a base of professional behaviour of ICT workers and, in turn, is a base of the safe and reliable eBusiness environment and society.

References

Brief Introduction to Authors

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