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Reasons behind unethical behaviour in the Australian ICT workplace

An empirical investigation

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Abstract

Purpose – The purpose of this study is to investigate the reasons behind unethical behaviour in the Australian Information and Communications Technology (ICT) workplace.

Design/methodology/approach – The study employed a qualitative research methodology. A total of 43 ICT professionals were interviewed during the month of February 2014 in six Australian capital cities. All interviews were conducted face-to-face and followed a semi-structured interviewing format utilising open-end questions and further probing questions. The purposive sample represented ICT professionals from large and small organisations, government and private sector, different geographic locations, ages, genders, types of jobs and employment experience. Data analysis was completed with the help of QSR NVivo 10, a software package for managing qualitative data.

Findings – Of the 25 reasons identified for unethical behaviour in ICT workplaces, 30 per cent of participants agreed on five major ones: pressure, bad management, greed, lack of respect towards ICT and communication issues.

Practical implications – By focussing on the reasons behind unethical behaviour in the Australian ICT workplace, this article helps those identifying strategies for dealing with unprofessional behaviour to take into account the root causes of unprofessional behaviour.

Originality/value – There is hardly any literature on reasons for unethical behaviour in the ICT workplaces. This article seeks to address this imbalance in the literature. Also, integrity systems in ICT are a new focus in collective, organisational ethics. Identification of and resolving unethical ICT workplace practice is an innovative contribution to the literature.

Keywords Affordance, Professionalism, Business practice, Integrity systems, Moral judgement

Paper type Research paper

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1. Introduction

The literature is rich with accounts that highlight the ethical problems facing Information and Communications Technology (ICT) professionals in their workplaces. See, for example, Sherratt *et al.* (2005), Lucas and Weckert (2008b), Van den Bergh and Deschoolmeester (2010) and Al-Saggaf and Burmeister (2014). There is also a plethora of studies that suggested strategies for solving ethical problems or improving ethical behaviour in the workplace. See, for example, Cappel and Windsor (1998, p. 29), Simpson and Burmeister (1998), Gleason (2002), Bowern *et al.* (2006), Lucas and Bowern (2007), Johnson (2010), Fleischmann (2010), Ville and Jani (2014) and Burmeister and Al-Saggaf (2014). However, with the exception of Badenhorst (1994) and Fassin (2005), there is hardly any literature on reasons for unethical behaviour in the ICT workplace.

But, even the Badenhorst (1994) and Fassin (2005) studies are not in the context of ICT; they are in the context of business in general. This suggests that there is an obvious gap in the literature relating to factors influencing unethical behaviour in the ICT workplace. Given that Australia's ICT market is worth nearly AUD $100 billion, there is a need to understand the influence of these factors so that strategies for dealing with unprofessional behaviour not only look at the nature of unprofessional behaviour but also at the root causes of unprofessional behaviour. This article seeks to address this imbalance in the literature, by focussing on the reasons behind unethical behaviour in the Australian ICT workplace as an example.

Qualitative analysis of semi-structured in-depth interviews with 43 participants in six Australian capital cities revealed 25 reasons behind unethical behaviour in the Australian ICT workplace. However, only the reasons for which there was at least 30 per cent agreement between interviewees are highlighted in this article. Five reasons met this criterion, namely, pressure, bad management, greed, lack of respect for ICT people and communications issues, and these are detailed in the empirical findings section of this article.

In the discussion, the consideration of an integrity system as a starting point for avoiding the situations that could lead to unethical behaviour is proposed. It is argued that an integrity system will *afford* certain ethical behaviour while discouraging unethical behaviour. Affordance in the context of an integrity system will encourage good behaviour by making it easy or attractive, or easier or more attractive than alternatives in a given situation.

The idea of integrity systems in ICT was central to the 2006 research project funded by Australian Research Council (ARC) in partnership with the Australian Computer Society (ACS). The project, for which the first and third authors were chief investigators, proposed that an improved integrity system that can hold industry members accountable for their actions be introduced to improve ethical standards in ICT industry (Lucas and Weckert, 2008b). The structure of such an integrity system was to contain an ethics infrastructure, prevention and resolution techniques, integration methods and management tools (Lucas and Weckert, 2008b).

2. Research methodology

2.1 Overview

This research project, supported by the ACS and the ARC, employed a mixed methods approach. The main research question was: What are Australian ICT professionals' perceptions regarding the ethical problems they face in the workplace, and how are

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these problems resolved? The project involved three phases, only the results from the second of which are addressed herein. The first phase involved a quantitative survey of members of the ACS, administered using SurveyMonkey.com, to allow the participants to fill the questionnaire and return it over the Internet. The survey was informed by the results of a 2006 survey conducted by Lucas and Mason (2008) and also by the instrument they used. All active ACS members (approximately 18,600) were invited to participate in the web-based survey by direct email sent to them by the ACS once on 12 September 2013, and the survey was closed on 6 November 2013. The questions comprised both close-ended and open-ended questions. The second phase of the study involved a set of semi-structured in-depth interviews with 43 participants selected from those who responded to the first phase (more information on this phase is discussed below). The third and final phase of the research involves focus groups with ACS Fellows and other senior ICT professionals, to determine the composition of the web resource, to better match strategies for solving ethical problems to those problems, and to refine those strategies to be most effective. That phase is expected to be completed by early 2015 and is therefore not reported in this article. Later work will seek to inform the tertiary community about the real challenges and strategies for solving ethical problems that are experienced in the ICT workplace, so that in future their graduates can be better prepared for the types of challenges they will face.

2.2 Semi-structured in-depth interviews

A personal constructivist approach was followed for the interviews. Kelly (1963) proposed personal construct theory, the focus of which is on individual interpretations of the world. In other words, reality is determined by the perceptions of each individual, with interpretations usually differing between individuals, at least, to some extent. Knowledge of the foundations and presuppositions, that is, the epistemology of this theory were reviewed by Schwandt (2003), who proposed that, on the one hand, positivist epistemologies conceive of knowledge as representing an independent, single reality and are predominantly concerned with the validity of scientific knowledge claims. On the other hand, epistemologically, the constructivist paradigm consists of a number of methodological concepts built on the idea "that human beings do not find or discover knowledge so much as we construct or make it" (Schwandt, 2003, p. 305). This occurs through individual construction of reality, or collectively through the context of shared understandings, language and culture. The data in this study were collected from individuals who provided their personal perspectives about a social phenomenon where interaction with others played a key part.

A total of 43 interviews were conducted during the month of February 2014 and took place in six Australian capital cities. All interviews were conducted face-to-face and followed a semi-structured interviewing format utilising open-end questions and further probing questions. The purpose of these follow-up interviews was to discover in-depth participant perceptions in regards to the nature of the ethical challenges experienced in the ICT workplace and how exactly these problems are often solved. These perceptions would not have been possible had only a constrained questionnaire been used. Semi-structured in-depth interviewing allowed rich accounts of participants' experiences to be obtained.

Purposive sampling was adopted to select the participants from those who had indicated a willingness to be interviewed. Purposive sampling allowed the researchers

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to choose cases that were representative of all sub-groups and personal characteristics which were of interest to the study (Patton, 2002; Al-Saggaf, 2004). Although there is no way of guaranteeing that the sample selected is representative in the probability sense, this sampling technique ensures the generalisability of the sample to the theoretical considerations (Al-Saggaf, 2004). Al-Saggaf (2004, p. 5) explains that "purposive sampling is driven by theoretical considerations rather than the need to count multiple cases of the same group". At the end of the analysis of the data from the quantitative survey (First Stage), a list of all the participants who had indicated a willingness to be interviewed was made. In addition to recording the contact details of these participants, their demographic information, from their responses to the survey, were also recorded. After the list was produced, the list was then further divided into six groups based on the capital city in which the participants live. For each group, eight participants, representing different ages, years of experience, and occupations, were assigned. Gender was difficult to vary due to the fact that only 15 per cent of the survey respondents were females. Table I below provides information on the process of sampling.

The sample drawn included professionals from a range of ICT organisations, both large and small, government and private sector, representing different geographic locations, ages, genders, types of jobs and employment experience. Table II below lists some of the characteristics of the participants whose views have been reported in this study. Participants who are not mentioned in the findings section are not included in Table II. Numbers in brackets, i.e. [Interviewee 1-43], in the findings section correspond to the Interviewee Number in Table II.

The process of interviewing complied with the ethics approval obtained from Charles Sturt University Ethics in Human Research Committee. Prior to the start of the process of interviewing, the participants were sent the ethics information sheet, which included a description of the study, what their participation involved, what happens to their data, that they do not have to answer any particular question if you wished so and assurances of their anonymity and the confidentiality of their personal information. They were also sent the consent form to sign, which sought their consent to participate in the interview, their right to withdraw at anytime during the interview, their permission for the researchers to tape record the interview and information on who to contact if they had any complaints about the ethical conduct of the interview. The signed consent form was collected from participants before the interview began.

The interview protocol consisted mostly of broadly open-ended questions with in-depth, probing subquestions. The interviews addressed the same issues with mostly the same questions but the order of questions depended on participants' responses. Also,

Table I.
The process of sampling

City	Different occupations	Different ages	Different years of experience
Perth	2	3	3
Adelaide	2	3	3
Brisbane	2	3	3
Melbourne	2	3	3
Sydney	2	3	3
Canberra	2	3	3
Total			48

Interviewee no.	Age	Gender	Years of experience	Occupation	City
1	54	M	30	Consultant	Perth
2	62	M	43	Project Manager	Perth
5	63	M	37	Consultant	Perth
7	51-55	M	32	Consultant	Perth
8	40	M	24	Self-employed	Adelaide
11	37	F	20	IT Manger	Adelaide
12	41-45	M	17	Manager	Adelaide
13	67	M	43	Consultant	Brisbane
14	59	M	37	Program Director	Brisbane
15	49	M	25	Business Development Manager	Brisbane
16	43	M	19	IT Manger	Brisbane
17	49	M	16	Business analyst	Brisbane
18	54	M	30	Senior Software Engineer	Brisbane
19	54	M	31	Senior technical specialist	Melbourne
20	59	M	40	Senior project manager	Melbourne
22	55	M	35	Consultant	Melbourne
23	55	M	28	National instructor manager	Melbourne
25	31	M	13	IT Manger	Melbourne
26	66	M	42	Business owner	Melbourne
27	69	M	49	Self-employed	Sydney
28	55	M	27	Database/IT coordinator	Sydney
29	48	M	15	Managing Director	Sydney
31	56	M	35	Managing Director	Sydney
33	24	M	2.5	Graduate Business Analyst	Sydney
34	35	M	21	Chief Information Officer (CIO)	Sydney
36	64	M	43	Consultant	Sydney
39	49	M	21	Public Servant	Canberra
40	32	F	8	Tester	Canberra
41	72	F	50	Accreditor	Canberra
42	51	M	30	Senior Enterprise Architect	Canberra
43	41	M	14	Operational Manager	Canberra

Table II.
The characteristics of the participants

participants were asked different probing questions depending upon the need to build on previous supplied information or to follow particular leads. Interviewees were asked to talk about:

Q1. What unethical practices have they come across at work?

Q2. What is the reason behind unethical behaviour in the ICT workplace?

Q3. What was done about those unethical practices?

Q4. How are the unethical problems often resolved?

Q5. What are the moral ways to resolve these problems anyway?

Q6. Do they know of anything that would help in getting better ethical behaviour at work?

Q7. Are there any codes/regulations? Are they helpful/effective?

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Q8. Who is in need of ethics training or education of any sort?

Q9. What should be included in the Web Resource that would help in encouraging ethical behaviour in the workplace?

This paper reports on the participants' responses to the second question, i.e. What is the reason behind unethical behaviour in the ICT workplace?

All the interviews were tape-recorded and transcribed verbatim. The first 26 interviews were conducted by the first author. The remaining 17 interviews were conducted by the second author[1]. This article focuses only on the component of the study relating to the reasons behind unethical behaviour in the Australian ICT workplace.

2.3 Data analysis

The transcribed interviews were analysed using thematic (qualitative) analyses. Data analysis was completed with the help of QSR NVivo 10, a software package for managing qualitative data. The unit of analysis was each individual interview document. Data analysis proceeded as follows. First, the interview documents were read several times so the researchers could familiarise themselves with the data collected. Next, free nodes (i.e. nodes not organised or grouped) were created based on keywords in the interview documents. Participants' comment below provides an example of how one of the nodes, "pressure", was created based on keywords in the text.

Interviewees identifying pressure as a cause of unethical behaviour.

Participants' comment:

- I think management always feels that pressure and they try to push it onto us [Interviewee 40].
- And there's always a pressure on there [Interviewee 42].
- And you take that down to a salesman who's being pressured to make the signing [Interviewee 31].
- But you're constantly under pressure [Interviewee 43].
- So there was a time pressure element [Interviewee 14].
- Usually it's because of externally applied project management pressures [Interviewee 17].
- So you end up with a lot of pressure [Interviewee 18].
- In the banks it's a big pressure [Interviewee 22].
- But we're put under enormous pressures by the system [Interviewee 3].
- One is a lot of clients put the pressure on just to get started [Interviewee 5].
- I think computer people have this pressure [Interviewee 6].
- The pressure that the employees are under to achieve targets [Interviewee 8].

Similar text within the interview documents was then located and assigned to these nodes. These nodes acted as "buckets" in the sense that they held all the data related to a specific node. At the end of the creation of the free nodes, these free nodes were further divided into tree nodes. That is, broader categories were developed to group the free

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nodes. This was to create a hierarchy that made it easier to make sense of the data and facilitate interpretation.

3. Findings

The analysis of the interviews revealed 25 reasons behind unethical behaviour in the Australian ICT workplace. Only the reasons for which there was at least 30 per cent agreement between interviewees, that is, at least 12 or more out of the 43 interviewees, are discussed below. Five reasons met this criterion: pressure, bad management, greed, lack of respect for ICT people and communications issues (see Table III for more information). Other reasons that were not brought by more than 30 per cent of the interviewees include self-interest, doing the wrong thing when it is not your fault and you have no choice, ICT project complexity, fear of losing job, lack of awareness, focus on short term and business allowing ICT people to take full control of project delivery.

3.1 Pressure

When asked during interviews for their views about the reasons for the unethical behaviour that they witnessed in their workplaces, 18 out of 43 participants identified pressure. Pressure can make ICT professionals falsely represent their skills in their CVs "to make themselves look good" [Interviewee 42] or can lead ICT professionals to "rip that business owner off […] to achieve targets, KPI's, KRA's" [Interviewee 8]. There is pressure to sell unwanted products "because they're obviously being paid according to how much they can sell" [Interviewee 33] or "keep things ticking along", i.e. billing a customer, because the organisation has set performance indicators that he has […] to meet" [Interviewee 20]. Pressure can also lead ICT professionals to cut corners to secure a contract because they have to justify a privileged salary:

> I had my practice manager leaning on me something terrible […] saying when are you going to get this deal signed […]. He'd ring me up 8, 9 o'clock at night "I just got off the phone with the USA. When are you going to get this thing signed?" So you've got to pull a rabbit out of the hat because when you're sitting on a leveraged salary that's 55-45 somewhere along the line something's got to give and if you're not having a good quarter, the following quarter you've got to have a good quarter otherwise you won't keep the kids [Interviewee 31].

Pressure to sell an unwanted product or secure a contract creates pressure for the decision maker at the receiving end:

> I hold a senior director position here so I do have a bit of influence over some of the decisions. So you do get a lot of pressure by hook or by crook if you like [Interviewee 43].

It would appear from the above examples that these pressures reflect the nature of business, i.e. not specific to the ICT industry or indeed driven by it.

Table III. Reasons behind unethical behaviour in the Australian it workplace

Name	Sources
Reasons behind unethical behaviour	
Pressure	18
Bad management	18
Greed	16
Lack of respect towards IT	16
Communication issues	15

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The pressure on project managers that is created by inaccurate estimations of costs of projects illustrates the above point. The following quote captures the pressure from inaccurate estimations of costs:

> I've seen projects done where the agencies called in external people to do the costing and scheduling for them and then off they go. So some project manager is lumped with a cost and schedule that they didn't have anything to do with building the thing and they've got to try and work to it [Interviewee 14].

Interview 22 explains that projects take one and half years before they deliver any value. Shareholders, he adds, don't accept this, arguing, there is a "mismatch between the reality of the timeframe and the marketplace timeframe". Interviewee [17] argues projects need to take their time:

> Good managers know that you have to if you want a good result, you've got to put the appropriate amount of work in to design it and to get it right. You can't put nine women on a job and have a baby organised in one month, sometimes things just take their time so there will always be that pressure [Interviewee 17].

The reason for the mismatch between the reality of project timeframe and the marketplace timeframe is because projects involve stages such as planning and analysis the outcomes of which are intangible. Unlike the implementation stage where the output is a functional system, the outcomes of planning and analysis stages are merely documents which can be easily perceived by shareholders as not valuable.

Irrespective of the nature of the pressure, it almost always comes from above:

> Now we've got to get this done, the minister has said we've got to deliver this big project; well we need to go to the end users of the people who really understand the mechanics of it. No, no we haven't got time, just make a decision, assume things, take short cuts on the requirements gathering and just deliver something and we can fix it all later [Interviewee 17].

But the problem with this type of pressure is that it leads to incomplete or non-functional projects:

> You may end up with not enough time to do the project so some, some features maybe ignored, some issues may not get revisited, some tests may not be done […] [Interviewee 18].

Or:

> They make the actual result far less – well not so much robust, but far less functional, by chopping parts out of it, to actually achieve a deadline [Interviewee 19].

What would be concerning also is if this pressure leads to projects that pose risks to the end users or are less secure or end up in "a disaster in terms of data loss" [Interviewee 23].

3.2 Bad management

Unethical behaviour can also be driven by bad management. The 18 interviewees, out of 43, who raised this issue, reported several examples of bad management practices including: favouring certain employees over others, insulting employees, preventing employees from applying for promotions or unjustly sacking employees as the following quote demonstrates:

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> We had a Dean once that was really shocking […] because what he did was he went round destroying the careers of some people because he didn't like the fact they said he couldn't have an Apple Mac or whatever – he just got rid of them [Interviewee 41].

Another example of bad management is "over-managing" employees because employees "stop taking responsibility for their own actions if they're over-managed" [Interviewee 13]. In addition, some managers were reported actually discouraging ethical behaviour. The following quote shows a director reprimanding a subordinate for doing the right thing:

> At which point one of our Directors questioned my ethical stance on it. I'm talking about a very well respected Director within our business, who has a good 15 years of age on top of me and Replied All and said, "Oh well surely you've gotten something off the back of the bus in the past, can't you just let it go, I don't understand why you're questioning it?" [Interviewee 34]

The issue in question in this case relates to an intellectual property infringement where an employee obtained a valuable resource for the business from a source without paying the vendor for it.

Interviewees also raised other concerns such as managers' unjustified violation of employees' privacy, withholding training from employees and failure to uphold duty of care. One interviewee mentioned managers ignoring the truth when it is inconvenient:

> I'm thinking of examples in relation to our ERP [Enterprise Resource Planning] system where we had external experts come into the organisation and tell us things that we never knew about our ERP because they were more expert at it than we were and they came in and said you've got these particular issues and they're quite severe issues. But because that was a very inconvenient truth there was all sorts of attempts made to try and discredit that information and just ignore it or defame the person who presented that information [Interviewee 12].

Ignoring the truth when it is inconvenient, according to one of the interviewees, is at its worst when managers do not stand up for their employees, particularly when they are doing the right thing. Interviewee 2 was removed from a health project he was managing because he told the client the truth about the state of the project which he did after consulting with his management. When the truth "back fired", his management distanced themselves from him:

> So the output of that was that the program manager said I don't want [Interviewee 2] working on the project anymore, so I got kicked off. None of my management team stood up for me and said "No look [Interviewee 2] had actually brought that to our attention and we actually advised him to go ahead" so that, obviously I found that extremely disappointing.

Contrary to the above example, Interviewee [17] argues that good managers protect their staff and stand up for them:

> Good mid to senior managers have as their main fuel in my view, the ability to protect their internal staff and to act as that buffer […] and it's a manager's job I think to protect those staff and to motivate them and to get them cracking but to protect them from a lot of the day to day bullshit that will flow downhill.

Management failure to protect their employees or not standing up for them will not only undermine the trust between management and their employees but will also send a message to employees that unethical behaviour is acceptable in the workplace.

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Indeed, the problem with bad management is that it does not only create situations that could lead to unethical behaviour but that their bad behaviour has a trickle-down effect and could shape the whole culture of the workplace:

> So unless the CEO [Chief Executive Officer] says "We can't sell this until we're ready", then you're never going to stop the behaviour. But he also is motivated by dollars coming through the door. So you've got a pyramid of people who are motivated to not stop the behaviour, and that tells me that it's probably impossible to stop – unless you've got a CEO who does have that ethical approach, and say "Well, we're not going to do this" [Interviewee 36].

Interviewee [25] agrees adding:

> If you've got a CEO who exhibits ruthless behaviour, is a bit of a bully, then the managers below are going to act in the same way, and the managers below that and the staff get treated that way and it becomes an acceptable form of behaviour.

Other interviewees note that ethical behaviour has "got to come from management down" [Interviewee 28] because "it gets driven from the top" [Interviewee 25]. That is why they emphasise the importance of "leading by example" [Interviewee 41] and having leaders who "could lead the way – not force the way" [Interviewee 16]. According to one interviewee [Interviewee 23], only "good leadership" who can act as "role models" could instil ethical behaviour in the workplace.

3.3 Greed

Greed is another factor responsible for unethical behaviour according to 16 participants. Interviewee [16], who defined greed as wanting more for less, makes this point clear:

> A lot of unethical behaviour is based on greed […]. The fact that they can make a few more dollars probably weighs heavier than doing the right thing so that in my book is greed. It's that they want more for less, and that translates to greed. So if you put – if you said to me what are the roots of things going wrong – I would say greed.

Interviewee [16] adds that the reason people allow greed to take control is because they don't have a moral compass.

Although only 16 participants brought up greed as a reason for unethical behaviour, upon a closer look of the interviewees' responses, this issue should be considered as one of the important factors behind unethical behaviour. Greed can result in the sacking of qualified people [Interviewee 19] or the appointment of less qualified people [Interviewee 15] to reduce costs, committing fraud by "Playing with the books to put more money in his pocket" [Interviewee 8], compromising quality, again to reduce costs, exerting pressure on an organisation to make them more efficient [Interviewee 43], not delivering agreed service [Interviewee 15] and engaging in price fixing [Interviewee 23].

Greed can "get the better of a person" when that person thinks they can get away with doing the wrong thing to satisfy their greed:

> If you think you can get away with it, you're going to make what you think you can get away with bigger and bigger, until you get – until you think you can get away with buying yourself a Merc, at which point you will get caught [Interviewee 39].

Greed is also responsible for enforcing bad behaviour, according to one of the interviewees who used the Global Financial Crisis to make his point:

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> If you instil the right behaviours they will exceed the outcomes but if you just do outcomes then you enforce the behaviours. So the example is the GFC [Global Financial Crisis], all they cared about was making a profit; they didn't – all that did was drive bad behaviours [Interviewee 29].

Interviewee [20] provides an example of what greed can do, arguing it can make people worry less about consequences:

> Because these guys are measured on how much revenue they make, their whole existence is based on revenue targets. And so they will achieve revenue without worrying about the consequences.

> Interviewee [23], on the other hand, worries that greed will encourage an organisation struggling on a budget to cut corners or cut costs which would result in death in some cases.

It would appear that the market place may in some way fuel greed. One interviewee explains:

> I only get paid when we sell something. I'm employed on a small retainer and it's success based outcome and this could be a very substantial outcome [Interviewee 27].

Another interviewee thinks money is the driver:

> Money's always the driver, from what I've seen […] it's doing what you say you'll do, and the driver behind not doing it is dollars [Interviewee 15].

Keeping costs low or doing things for least costs is another way to save money:

> I think it's the insistence on doing everything for least cost. Doing everything cheap, means it's not necessarily done right and quite often, it's not done right. It's all about banging things out, as quick as you can, well basically as cheap as you can. There's very little emphasis – despite, they can claim there's quality, there's a value, but it's not, just money. It's all about being cheap, which means they make mistakes and screw up and you get massive problems all the time [Interviewee 19].

In the case of banks, interviewee [19] argues that the situation is worse because banks are expected to make greater profits every single quarter and the only way to achieve this is either by expanding the business or cutting costs. But, as can be seen from this quote, when things are done cheaply, quality is the aspect of the product or system that suffers the most.

3.4 Lack of respect for ICT people

Lack of respect for ICT people is said to create circumstances that could result in unethical behaviour. The 16 participants who raised this concern discussed several of these circumstances including the delivery of incomplete, non-functional or insecure systems; the undervaluing of the role of ICT professionals, the underestimation of their capabilities, and the unjustified sacking of ICT employees. As an example of how lack of respect for ICT people could result in a situation whereby the system delivered was non-functional, in an ICT project commissioned for a state government, the program director acted against the advice he received from all his senior analysts and project managers:

> "Well we've got this instruction from the minister's office, we've got to do it on that day what do you think?" And they went round the table and each man said "No, no, terrible idea,

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> impossible, can't be done, no, no, don't do it, forget it". "Okay, we're going live" [Interviewee 17].

This example, which interviewee [Interviewee 17] shared during the interview while laughing, from the irony of the situation, is problematic not only because the program director disrespected the professional judgment of his senior analysts and project managers but more importantly because the system that went live was non-functional.

Part of why there is lack of respect for ICT people, is because people don't understand the nature of the ICT work. For example:

> Lots of people in the wider business don't really know what ICT people do, we sit around behind our computers and they don't really understand the full function of IT [Interviewee 11].

Interviewee [Interviewee 11] argues that lack of understanding of their role often translates to other people having misconceptions about them or treating them as suspicious, adding "anytime they see us kind of doing anything a bit dodgy, they go 'Oh the ICT are wasting their time again'". Some senior executives not only feel that ICT people often "waste their time" but these senior executives perceive that ICT people themselves are "a waste of time", as the next quote shows:

> A company where I worked everybody knew that the new CEO thought that the IT department was a waste of time. And when he took over he […] a new CIO the first thing the CIO did was sack all the level 2 managers mostly who were well respected and well liked, sacked them all [Interviewee 1].

Lack of understanding of the role of ICT employees can also come from own members of the team, as this case illustrates:

> Apparently the project manager for whatever project said "Oh, so you've finished all the automated testings, does that mean I can just let you all off now?" […] One weekend later the project manager rings up his recently sacked head of testing and says "I don't know what all this tests results mean, can you guys please come back and do that" [Interviewee 40].

As can be seen from the above two quotes in both cases, the lack of understanding of the role of ICT or the perception that ICT is "a waste of time" resulted in the sacking of ICT professionals. What disappointed Interviewee [Interviewee 33] about the sacking was that it was sudden: "they found out that their job had disappeared basically overnight with no, no prior warning or anything like that". These examples show that lack of understanding of the role of ICT can result in lack of respect towards the ICT employees involved.

One of the reasons for this lack of respect for ICT people, it would appear, is the inability of ICT people to inform the wider business about their role. The frustration of this manger with ICT people provides insight into this problem:

> Because all the IT people, what they do is they give me a big number. They give me a process, they give me a schedule – they give me all these overhead things like testing and checking things. I don't want any IT people; I want a business person doing a good job [Interviewee 7].

It seems that ICT people are not doing enough to market the value of their services to the business. Interviewee [Interviewee 11] notes that "usually the really, really good technical people don't necessarily have that capacity to translate the message to the business, and that's a challenge". Interviewee [Interviewee 19] agrees with this view, adding that the problem stems from the top:

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> Really they need to be selling to all the CIO's who then actually advertise what they do in their own companies and why it's important. I think their CIO's are failing to do that.

The failure of ICT people to market their services is a known problem in the ICT industry. While ICT people have always tended to be strong in their ICT domain, they have always tended to be weak in the communication area. Interviewee [Interviewee 20] laments this weakness:

> So you know they're buying your skill to perform a task, but I think at the end of the day in IT we're actually not selling the skill [Interviewee 20].

While the link between lack of respect for ICT people and unethical behaviour may not appear to be obvious, as can be seen from the above examples, lack of respect for ICT people was responsible for the delivery of a non-functional system and the unfair dismissal of ICT employees. While part of the problem of this lack of respect for ICT people stems from the lack of understating of people in the wider business of the role that ICT people play in the business, another reason is because ICT people are not skilled at marketing their services to the business community, suggesting ICT people themselves are partially to blame for this problem.

3.5 Communication issues

Poor communication is another factor behind unethical behaviour in the ICT workplace. It can result in the gathering of inaccurate requirements, scope creep and intimidation of stakeholders to name a few. In the context of requirements gathering, poor communication can prove costly because if the customer, client or end users are not satisfied with the end product, they may not accept it, which means more time and resources will be spent on the project. A situation like this can arise when a key customer communicates the system requirements to the business analysts on behalf of all other customers. Interviewee [Interviewee 5] explains how:

> But a lot of times you get – the key customer will go "You just need to speak to me – I know them" […]. I had to fight that battle many times through my career, and it's "I understand, but we need to check with these other people" [Interviewee 5].

Interviewee [5] argues that this problem can be solved by setting up the right governance and ensuring the people at the top are kept in the loop:

> The way to get around it I think is to make sure you get your governance right, speak to the people at the top about that – the highest you can, and have the right governance. [Interviewee 5].

As with the previous section on respecting the ICT profession, interviewee [Interviewee 5] also advises system analysts to establish their credibility in the workplace and keep communication going, preferably in writing.

The findings of this study suggest that undocumented communication can cause scope creep which can occur when the customer continuously introduces new requirements to the system without going through the proper communication channels. The following quote captures this scenario:

> A person sitting near me he answers the phone, and I can hear him talking about some features that are going to go into the software and he's saying "Yes, yes I'll do that, yes, yes, yes" and he puts the phone down [Interviewee 2].

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Interviewee [2] was not impressed with his colleague:

> Excuse me can you please tell me who you were just speaking to then" and he says "Oh I was speaking to somebody in San Francisco". I said "Who is that person?" He says "Oh well he does such and such". I said "What did he ask you to do?" Oh he said "he asked me to put this feature into the software" and I said "And who authorised him to do that, who authorised you to receive this phone call and to put this feature into the software?" "Oh but that's how we always do it, that's what everybody does" [Interviewee 2].

To fix this problem, Interviewee [2] set up a change control board and made the customers commit themselves to the requirements in writing.

The findings of this study suggest that poor communication could cause ICT projects to fail. Poor communication can cause people in the wider business to feel intimidated, which can in turn let ICT people take over control of ICT projects resulting in business people having little say in these projects. This scenario often ends in ICT projects failing because they don't meet the requirements of the business. Interviewee [26] sheds light on this complex relationship:

> It comes back to the starting point. And the starting point, that we find, is that IT takes over. What happens is, the project starts, whatever reason, has a goal, has a rational and before long, IT's got it, it's in their hands, their hands are on the steering wheel. So the business slips out of control and IT takes over [Interviewee 26].

As mentioned above, the reason ICT people take over control of ICT projects is because ICT people unintentionally, it would appear, intimidate business people by being too technical:

> I think IT spooks business by its jargon and business thinks, I don't understand this, therefore I better let IT take control. What I've been trying to teach my business folk, is you don't ask IT questions, you ask business questions. […] I don't want to hear any IT jargon, I want to know, what does that mean? [Interviewee 26]

Interviewee [26] also shared a quote he heard from a CEO that provides evidence for this point:

> I was on this board I'm on and the CEO said to me "Every time the IT manager comes into my room, my eyes glaze over" and it's because he starts talking in a language he doesn't understand. Well that's disgraceful isn't it? [Interviewee 26]

Interviewee [26] is embarrassed by project's failure "IT, in my opinion has been an embarrassment and a spectacular number of ICT projects have failed" and wants the taking over of control by ICT to stop:

> Look I'm blaming IT because we know what we're doing. We're taking control, we're not delivering, surely that's time to have a wakeup call for IT, to say, stop doing this, let's change it [Interviewee 26].

He is also embarrassed that business does not have a say in how ICT projects are delivered:

> The RFT [Request for Tender] that they put out, the tender, was something like 53, 56 pages. Guess how many pages were reserved for the actual user requirements? 2 and all the rest of it was about the Oracle stack, just disgraceful [Interviewee 26].

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His solution to this problem lies in giving the responsibility of running a project to a general business manager and making him/her accountable for the success or failure of the project. This general business manager should then involve an intelligent group of users in the project and help them drive the business needs and the outcomes from the system.

4. Discussion

As seen in the findings, above, five main reasons were given for unprofessional or unethical behaviour. Although more research is needed to better understand how to redress these reasons, this research and the literature do suggest a way forward.

Some people behave unethically simply because they are not what most of us would consider to be very good people, psychopathic murderers for example. Others will sometimes behave unethically because they are weak-willed; when a strong temptation is put in their way. They may not normally be immoral people but in certain circumstances they cannot resist temptation. Still others, who are neither immoral nor weak-willed, might on occasion behave unethically when they are encouraged to do so. Probably few people fit neatly into any one of these categories and the boundaries are not sharp. It is more likely a continuum with very immoral people at one extreme and extremely moral at the other. It is useful, however, to differentiate these categories when considering the reasons given during the interviews for unethical behaviour. Only one, greed, really points to what is often seen as a character flaw (but we will return to that). The others all suggest unethical behaviour arising in the ways mentioned in the second and third categories above. To explore this further, the notion of an integrity system will be outlined and the five reasons discussed within that context.

Integrity systems are designed (or perhaps developed in an *ad hoc* manner) by institutions such as businesses and corporations to reduce or minimise inappropriate behaviour and to support an ethical climate. Such a system is not a system in any formal sense but is rather "a messy assemblage of formal and informal devices and processes" (Alexander and Miller, 2010, p. 39). They are non-legal mechanisms that can include codes of ethics and conduct, unofficial sanctions, meetings in which ethical topics are raised, education on ethical issues, mechanisms of accountability and so on. According to Seumas Miller, an integrity system "is an assemblage of institutional entities, roles, mechanisms and procedures, the purpose of which is to ensure compliance with minimum ethical standards and promote the pursuit of ethical goals" (Miller, 2007, p. 354). An effective integrity system will not eliminate all unethical behaviour but hopefully will make ethical behaviour easier even in difficult circumstances, for example, when computer professionals are pressured to cut corners in order to finish a project on time.

Before considering the five reasons in the context of integrity systems, it is worth looking briefly at the concept of affordance. The term was introduced by […] Gibson in the context of animals and their environment: "The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill" (Gibson, 1979, p. 127). Since then it has been frequently discussed in relation to artefacts. Norman, for example, says "Affordances provide strong clues to the operation of things" and uses as illustrations "Knobs are for turning" and "Slots are for inserting things into" (Norman, 1988, p. 9). Pfaffenberger talks of affordances in terms of "how a thing is to be used" (Pfaffenberger, 1992, p. 284), and Philip Brey has followed this type of account in

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his discussion of artefacts as social agents (Brey, 2005). These discussions of artefacts having affordances is relevant here because an integrity is an artefact; it is developed in order to do something. So an integrity system should have affordances; it should afford moral conduct. Shannon Vallor's use of affordance comes close to the use here in her example of creating a social network site to create "an opportunity or affordance to perform regular charitable acts in this online community" (Vallor, 2010, p. 162).

Affordance as we are using it here is somewhat stronger than mere opportunity or facilitation. Here it involves something like encouraging a behaviour by making it easy or attractive, or easier or more attractive than alternatives in that context. This is an extension of the common usage but something very like this is defended by Withagen when he argues that "affordances […] can also invite behaviors" (Withagen *et al.*, 2012, p. 251). In this sense, in places with good Internet connections email afforded, encouraged, frequent and brief communication between people; email was easy and attractive in the sense that it was much quicker and generally more convenient than letter writing.

As already mentioned, affordance is relevant to the discussion here because an integrity system is an artefact. It is a human creation just as the Internet or a computer is. Integrity systems therefore *afford* certain kinds of behaviour and discourage others. A good system will afford ethical behaviour. This is a mere sketch of integrity systems and affordance, but for the purposes here it will suffice. The discussion of the five reasons given for unethical behaviour can now proceed, beginning with pressure.

Pressure can lead to reducing testing to have a project finished on time, selling a product known to be unsuitable for the task and so on. Behaving unethically in these kinds of situations frequently results from a conflict of interest and the conflict can be non-trivial. People need jobs and if there is a threat of losing a job that can be an important consideration even if in an ideal world it would not be an overriding one. Many factors need to be taken into account when weighing up the risks of a potentially faulty product against the consequences of losing one's job. How important is the product, will lives depend on it and so on, on the one hand, and on the other, consideration such as whether or not I am supporting a family and how easy it will be to get another suitable job. It may be possible, if difficult, to weigh up the potential consequences of the alternatives in a purely rational manner but a complicating factor is that most of us love our families more than our clients and want to do the right thing by them. From a professional perspective, however, it is unethical to cut corners for whatever reason. So the conflict can be real. A useful integrity system to encourage ethical behaviour in pressure situations would need to contain more than education or advice on correct behaviour. The employee may know what the right thing to do is but just not be able to do it without assistance. Strategies that might help could be various sorts of counselling, perhaps by more experienced professionals who have successfully negotiated such pressure situations. Assistance to behave morally should be part of an integrity system as much as education, rules and codes.

Another factor relevant to pressure is that there is a public complacency toward failures in ICT that is not tolerated in other areas. Currently in Australia tradesmen, such as electricians, have to be licensed to ensure that they cannot install wiring that is not properly insulated, but there is no equivalent licensing for ICT people creating systems that have the potential to harm hundreds of people. This could be a factor when a conflict of interest arises due to pressure to complete a project. Reducing testing, for

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example, may not seem as important as it should. Education on the importance of testing in these situations should be stressed and comparison made with other industries where testing is required and perhaps more stringent. The public is beginning to apply pressure back on the ICT profession. Litigation is a prime example of this, particularly when high profile cases get wide media attention. Such situations lead to requirements for greater accountability, regulation and in time ensures that many of the "cowboys" are removed and replaced with suitably qualified, licensed professionals.

Second, bad management. Managers are related to integrity systems in a couple of ways. Their seniority in the organisation gives them important roles to play in developing and maintaining these systems, but the system also applies to them. A good integrity system will afford ethical conduct from managers just as much as from more junior staff. If they are not behaving ethically the system clearly is inadequate and is unlikely to have any useful influence on those lower in the hierarchy. Part of the system should include ethical management skills and strategies for recognising and avoiding bullying.

Although the examples of findings reported here show the effects of bad management, the same study also had examples of the opposite, which can be seen as parts of good integrity systems. In Australia there is a multi-tiered banking system, with the "big 4" referring to the four biggest banks. One of those, Westpac Banking Corporation, stood out as an example of good ethical management practice. They espouse a set of values that all employees, from the person at the top to the lowest person in the organisation, have to live up to. One was valuing the environment. In the staff room in the Sydney office there is a large display, that shows in real-time the usage of energy, disposable cups and other things, so that employees are kept aware of how they are collectively contributing to that value. Furthermore, in the six-monthly performance reviews of all employees, they need to show how they live up to those values. For example, another is integrity. It is not defined. Instead, each employee has to define what it means in their work context and then show how they have been a person of integrity in the past six months, and what they intend to do in the coming six months that shows integrity in their work. This is an example of at least part of a good integrity system.

Thirdly, the issue of greed. In Christianity, greed has traditionally been seen as one of the seven deadly sins. Perhaps in the current capitalist world it is not seen quite so negatively but to be called greedy is still not to be praised. This is obvious in the responses from interviews where greed is seen essentially as an excessive desire for money which can easily lead to bad behaviour. Shoddy products, poor service and so on are likely to result from putting self-interest ahead of the clients' interests or that of the wider public. Most people have greed to some extent and in society in general, when this gets out of control it frequently leads to corruption. That is why society has ombudsmen, legislative procedures and corporate "watch-dogs". Within a business, a strong integrity system can help to counteract the tendencies to behaviour based on greed. Overcoming this desire can be made easier if it is well known and frequently stressed that selling unsuitable products is against company policy even where it is profitable. It is important to note that these systems should not only help in individual situations but should create an ethical climate in the organisation.

Fourthly, the lack of respect for ICT people. ICT is seen as a young profession that lacks the respect given to older professions such as law, medicine and accounting. These have a long tradition and are respected in the community. The professional societies in

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those disciplines have advocated on behalf of members for generations and through credentialing, certification and other means have gained the respect of the community. One might see this in terms of "agency", both the agency of individuals and that of professional societies. The focus of the present study has been on the individual agent and part of the problem of this lack of respect for ICT people seems to stem from ICT professionals not being skilled at marketing their services to the business, suggesting they themselves are partially to blame for this problem. Communication difficulties, to be discussed in the next paragraph, are part of the issue. To engender respect, the individual agent must be both competent and ethical. Codes of ethics, which emphasise the role of the individual professional are frequently seen to play an important role here (Bowern *et al.*, 2006; Burmeister and Weckert, 2003). But just as in other disciplines the professional society for ICT needs to be an agent of change. This should not be restricted to a single professional society, but multiple such societies, as for example, through the work of the International Federation of Information Processing (IFIP), which has 56-member ICT societies, and other affiliate members, representing over 90 countries. Such advocacy has already been seen at a professional society level (Bowern *et al.*, 2006) and at the IFIP level in relation to codes of ethics (Burmeister, 2013), and needs to also happen in a way that will lift the public profile of ICT. Indeed this has also been seen recently in the work of IFIP in the World Summit on the Information Society, from which a recommendation concerning ICT ethics, professionalism and international licensing was made that was then tabled at the UN General Assembly in NY in October 2014. That is, individual agency is not sufficient to raise the respect of the discipline and instead the agents who should take on that responsibility are the professional societies and the profession itself. It is important that not only the business or corporations for which the ICT professionals work have strong integrity systems but the professional societies also need strong systems that support the ethical conduct of their members. ICT professionals need to be encouraged to have pride in their work and in the ICT industry.

Finally, the communication issues. Two kinds of problems are highlighted here. One is poor communication regarding specifications for projects and changes in specifications, and the other is poor communication by the ICT professionals. While these communication problems are not strictly speaking ethical problems in themselves, if they can lead to ethical problems they need to be addressed. As seen in the findings section, participants suggested a way forward, at least with the specification issue, namely through better governance. For example, a change control board can be set up, and customers then need to commit themselves to the requirements changes in writing. The communication problems of the ICT professionals may need to be addressed by better ICT education. These two strategies may not be part of an integrity system, but such a system should help to make clear the importance of communication to ethical outcomes. Particularly in the second case, the integrity system of the ICT professional society should inform the ICT education policy of the society.

5. Conclusion

A review of the literature has found that the literature is rich with accounts that highlight the ethical problems facing ICT professionals in their workplaces. However, with the exception of two articles, there is hardly any literature on reasons for unethical behaviour in the ICT workplace. In the face of this, a question arose: What are the

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reasons behind unethical behaviour in the ICT workplace? Qualitative analysis of semi-structured in-depth interviews with 43 participants in six Australian capital cities revealed 25 reasons behind unethical behaviour in the Australian ICT workplace. However, only the reasons for which there was at least 30 per cent agreement between interviewees were reported on in this article. Five reasons met this criterion, namely, pressure, bad management, greed, lack of respect for ICT people and communications issues.

The research reported in this article, which focused on the second phase of the project, is largest study of ICT ethical practice in Australia ever undertaken. The findings are applicable not only to the ICT profession in Australia, but also around the world, as seen in the discussion of the roles of professional societies and that of IFIP.

Lack of respect for ICT people and communication issues, although separate problems, shared the common area that ICT professionals need to better educate their project stakeholders in the values ICT and their professionalism has to offer. Similarly, the problems of bad management and greed pointed to a common resolution of improving corporate culture, the need to move from egotism to the utility of a collective good, such as through an integrity system. The results of the current study show that such a system can be a useful starting point for avoiding the situations that lead to unethical behaviour in the ICT workplace. Further work is needed to establish what integrity systems, in an ICT context, look like, and to find other appropriate resolutions to these five reasons for unethical behaviours. Identifying the root causes of unethical behaviour in the modern ICT workplace is but a start. With the exception of lack of respect for ICT people issue, these five problems are in reality problems of business practice, and not merely ICT ones.

Note

1. The three authors are the Chief Investigators in this project.

References

Alexander, A. and Miller, S. (2010), *Integrity Systems for Occupations*, Ashgate, London.

Al-Saggaf, Y. (2004), "The effect of online community on offline community in Saudi Arabia", *Electronic Journal of Information Systems in Developing Countries*, Vol. 16 No. 2, pp. 1-16.

Al-Saggaf, Y. and Burmeister, O.K. (2014), "Australian ICT professionals' perceptions regarding professionalism in the workplace: a mixed method approach", in *Proceedings of ETHICOMP 2014 Conference*, *Les Cordeliers, Paris, 25-27 June*.

Badenhorst, J.A. (1994), "Unethical behaviour in procurement: a perspective on causes and solutions", *Journal of Business Ethics*, Vol. 13 No. 9, pp. 739-745.

Bowern, M., Burmeister, O.K., Gotterbarn, D. and Weckert, J. (2006), "ICT integrity: bringing the ACS code of ethics up to date", *Australasian Journal of Information Systems*, Vol. 13 No. 2, pp. 168-181.

Brey, P. (2005), "Artifacts as social agents" in Harbers, H. (Ed.), *Inside the Politics of Technology. Agency and Normativity in the Co-Production of Technology and Society*, Amsterdam University Press, Amsterdam, pp. 61-84.

Burmeister, O.K. (2013), "Achieving the goal of a global computing code of ethics through an international-localisation hybrid", *Ethical Space: The International Journal of Communication Ethics*, Vol. 10 No. 4, pp. 25-32.

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Burmeister, O.K. and Weckert, J. (2003), "Applying the new software engineering code of ethics to usability engineering: a study of 4 cases", *Journal of Information, Communication & Ethics in Society*, Vol. 3 No. 3, pp. 119-132.

Cappel, J.J. and Windsor, J.C. (1998), "A comparative investigation of ethical decision making: information systems professionals versus students", *Database for Advances in Information Systems*, Vol. 29 No. 2, pp. 20-34.

Fassin, Y. (2005), "The reasons behind non-ethical behaviour in business and entrepreneurship", *Journal of Business Ethics*, Vol. 60 No. 3, pp. 265-279.

Fleischmann, K.R. (2010), "Preaching what we practice: teaching ethical decision-making to computer security professionals", in Financial Cryptography and Data Security (Eds. R. Sion et al.), Springer Berlin Heidelberg, pp. 197-202, doi: 10.1007/978-3-642-14992-4_18

Gibson, J.J. (1979), *The Ecological Approach to Visual Perception*, Houghton Mifflin, Boston, MA.

Gleason, D. (2002), "ICT professionalism", paper presented at the ETHICOMP, Lisbon, 13-15 November.

Johnson, J. (2010), "Teaching ethics to science students: challenges and a strategy", in Rappert, B. (Ed.), *Education and Ethics in the Life Sciences: Strengthening the Prohibition of Biological Weapons*, ANU E Press, Canberra, pp. 197-213.

Kelly, G.A. (1963), *A Theory of Personality: The Psychology of Personal Constructs*, W.W. Norton & Company, New York, NY.

Lucas, R. and Bowern, M. (2007), "Ethics survey: haste sours quality in ICT", *Information Age*, June/July, pp. 28-30.

Lucas, R. and Mason, N. (2008), "A survey of ethics and regulation within the ICT industry in Australia: ethics education", *Journal of Information, Communication and Ethics in Society*, Vol. 6 No. 4, pp. 349-363.

Lucas, R. and Weckert, J. (2008b), *Ethics and Regulation in the ICT Industry*, Centre for Applied Philosophy and Public Ethics, Canberra.

Miller, S. (2007), "Institutions, integrity systems and market actors", in O'Brien, J. (Ed.), *Private Equity, Corporate Governance and the Dynamics of Capital Market Regulation*, Imperial College Press, London, pp. 339-370.

Norman, D. (1988), *The Psychology of Everyday Things*, Basic Books, New York, NY.

Patton, M.Q. (2002), *Qualitative Research and Evaluation Methods*, 3rd ed., Sage, Thousand Oaks, CA.

Pfaffenberger, B. (1992), "Technological dramas", *Science, Technology and Human Values*, Vol. 17 No. 3, pp. 282-312.

Schwandt, T.A. (2003), "Three epistemological stances for qualitative inquiry: interpretativism, hermeneutics, and social constructionism", in Denzin, N.K. and Lincoln, Y.S. (Eds), *The Landscape of Qualitative Research*, 2nd ed., Sage, Thousand Oaks, CA, pp. 292-331.

Sherratt, D., Rogerson, S. and Fairweather, B. (2005), "The challenge of raising ethical awareness: a case-based aiding system for use by computing and ICT students", *Science & Engineering Ethics*, Vol. 11 No. 2, pp. 299-315.

Simpson, C.R. and Burmeister, O.K. (1998), "New professionals, new measures of worth, new ethic of collaboration", paper presented at the ETHICOMP: Fourth International Conference on Ethical Issues of Information Technology, The Netherlands.

Vallor, S. (2010), "Social networking technology and the virtues", *Ethics and Information Technology*, Vol. 12 No. 2, pp. 157-170.

Van den Bergh, J. and Deschoolmeester, D. (2010), "Ethical decision making in ICT: discussing the impact of an ethical code of conduct", *Communications of the IBIMA*, pp. 1-10.

Ville, K. and Jani, K. (2014), "Why (an) ethics code for information system development needs institutional support: there is even an upside for computing practitioners and businesses", paper presented at the ETHICOMP, Les Cordeliers, Paris, 25-27 June.

Withagen, R., de Poel, H.J., Araujo, D. and Pepping, G.-J. (2012), "Affordances can invite behaviour: reconsidering the relationship between affordances and agency", *New Ideas in Psychology*, Vol. 30 No. 2, pp. 250-258.

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