

# Chapter 9

## Trust, Control, and Responsibility in Research – An Accountability Perspective



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### Accountability and Control

Trust is very important for higher education, both for teaching and research. Macfarlane (2009) provides examples of how different personal characteristics that underpin trust, namely benevolence, integrity, competence and predictability, are essential for students to develop trust in their teachers and how this trust erodes if these expectations are not met.<sup>1</sup>

For higher education research, trust is as fundamental as for university teaching. After all, knowledge that is taught should reflect the knowledge gained by research and the pursuit of new scientific knowledge builds on trust in the existing knowledge, produced by (hopefully) trustworthy members of the scientific community in a highly complex collaborative way and supported by institutions that ensure that until it is proven otherwise, the knowledge is the best we can have (Hardwig, 1991).

Academics have for a long time enjoyed a status that came close to being a ‘profession’ (MacDonald, 1995),<sup>2</sup> that is, being recognised as having ownership over an area of expertise that encompasses a common range of tasks and

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<sup>1</sup> See also Macfarlane’s, Chap. 6 in this Volume.

<sup>2</sup> Based on MacDonald (1995), Hoecht (2006) argues that in order to qualify as a profession, academics would need to be able to pursue a project of social closure that entails striving for a legal monopoly for its services from the state. To achieve this, the group will need to establish a controlling influence over the nature and the provision of its knowledge and have the ability to gain trust and respect in society for the role it plays in it, for instance, by being seen as advocating universal principles for the good of society as a whole. In the UK today at least, these conditions are not or no longer met by academic employees as a generic group.

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competences, having a significant role in the governance of institutions in which they serve and having a substantial degree of autonomy and the ability to organise their work in collegial occupational relationships rather than being subjected to hierarchical managerial control (Shattock, 2014). Whether academics have ever really met the conditions that would qualify them as a profession is a different matter, but there is little doubt that alongside other public services, managerial control has increasingly shaped the work of academics in the last two decades in the UK and potentially eroded their individual and their group autonomy (Oeberg et al., 2016). Judging by the extensive literature on New Public Management (NPM) in general and in higher education in particular (see, for example, Henkel, 2000; Chandler et al., 2002, for NPM in higher education, and writers, such as Beck 1992, and Power 1997, more generally), it appears that one key argument that has been advanced by governments to justify more managerial control over their public sector employees is their claim that there has been a public loss of trust in ‘professional’ services and the need to justify taxpayers’ expenditure for which they are legally and morally responsible. Moreover, as the public has lost its trust in the professions and their ability to self-regulate so as to ensure that they can maintain their standards, the professions need to be made more accountable to the government agencies that oversee them on behalf of the public. Increased accountability, so this argument, will restore lost public trust in the professions.<sup>3</sup>

Accountability is, like ethics, one of these concepts that is very difficult to argue against.<sup>4</sup> Surely, nobody would want to argue the case for unethical behaviour and similarly rejecting the need to be accountable comes close to condoning potentially despotic behaviour (Trow, 1996). As Trow (1996: 311) puts it, “accountability is a constraint on arbitrary power, including fraud, manipulation, malfeasance and the like. In serving these functions, accountability strengthens the legitimacy of institutions...” However, he also considers accountability to be a double-edged sword. “For one thing, accountability is an alternative to trust; and efforts to strengthen it usually involve parallel efforts to weaken trust” (Trow, 1996: 311). What Trow suggests here is that accountability functions as a constraint on the behaviour of a person who is accountable to a principal and comes

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<sup>3</sup>One reason why accountability and auditing are so much in demand in particular in the public sector may be that as a concept and administrative tool, they are ideally suited to serve a legitimisation need of governments. Faced with an erosion of generalised trust, governments can respond by making their own subordinate public institutions more accountable. In doing so, governments can act as the guardians of the public interest, distract from any deficiency they may have in terms of their own accountability and gain better control over their subordinate and dependent institutions.

<sup>4</sup>Ethics has a very powerful legitimacy claim: it is about doing the right thing, doing what is good, proper and moral, following a moral course of action. Anyone arguing against its principles and objectives can easily be accused of being a (moral) egoist and of pursuing his/her narrow self-interest. While the right ethical judgements can be difficult to make, ethics as a discipline largely stands above criticism. As a consequence, individuals and committees that have been put in the position to make decisions on ethical issues carry a significant amount of prestige as well as expert and moral power (Hoecht, 2011).

very close to establishing (a degree of) control over this person's behaviour that limits his/her ability to betray the principal. However, as I will discuss in more detail below, while control can be seen as a substitute or as an alternative to trust under certain conditions, it is all too easily exercised in a way that gives the one who is accountable the justified perception of not being trusted (very much) by the principal and thereby erodes his/her commitment and motivation to the principal. Before we can take this further, however, the question that needs to be asked is not whether accountability is a good or bad, but what we mean by accountability: accountability by whom; to whom; for what; and in which way? Bovens (2007) argues that accountability has developed into an umbrella concept that covers a range of other related concepts, such as transparency, responsiveness, responsibility and integrity and that this common broad usage of the term has made accountability more of an evaluative rather than an analytical concept. To regain accountability as an analytical concept, one should go back to a narrow definition, such as, "accountability is a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face consequences" (Bovens, 2007: 450). This narrow definition of accountability as a specific social relation allows for a distinction to be made between, for example, accountability and transparency – transparency does not necessarily involve scrutiny by a specific forum. More importantly, it allows for a distinction between accountability and control. Control means 'having power over' and it can involve proactive means of directing conduct, for example, through straight orders, directives, financial incentives or laws and regulations. But these mechanisms are not mechanisms of accountability per se, because they do not in themselves operate through procedures in which actors are to explain and justify their conduct to forums. "Accountability is a form of control, but not all forms of control are accountability mechanisms" (Bovens, 2007: 454). According to Bovens then, the need to justify and explain one's behaviour is the key difference between control and accountability, but Bovens does not tell us more about the terms of this justification apart from "for one's conduct" (Bovens, 2007: 452) and we will see that the "for what?" question is an important one in the analyses of accountability relations.

If we understand control as the ability to influence someone else's behaviour in a way that we desire, then this person's need to justify is imposed by us as the controlling principal and may be or not be met by the accountable agent's own desire to justify his or her actions. We do, then use the power of potential sanctions over the agent to make the agent justify his/her actions and determine the form in which this justification has to take place. This means that while not all forms of control are accountability mechanisms, accountability uses at least latent control and power mechanisms to make sure that the agents will justify and explain their actions – and also in the exact terms that the principal has the power to determine.

## Accountability and Trust: The Limitations of the Principal-Agent Theory

In my attempt to clarify the concepts of accountability and control, I have resorted to the principal-agent theory, which is also the basis and conceptual framework for the predominant part of the accountability literature (Gailmard, 2014) and, as we will see, in part at least responsible for the sometimes dysfunctional effects of accountability regimes put into practice.

Accountability conceptualised from a principal-agent theory perspective allows us to answer the key questions – who is responsible for what to whom and in which way? – in a straightforward way. However, principal-agent theory comes with some fundamental assumptions about the motivation and behaviour of the agent: the agent is a self-interested individual who will pursue his or her own interest rather than the principal's interest unless their self-interest can be aligned with incentives and with the exercise of direct supervision and control (Gailmard, 2014). This assumption plays down any intrinsic motivation that the agent might have and ignores commitment to professional norms and values (Mansbridge, 2014; Greiling, 2014). The agent will not behave responsibly by his/her own accord, but needs to be 'called to account' by the threat of sanctions and reward incentives. The monitoring, supervision and control required come at a considerable direct economic cost to the principal as well as indirect costs (Mansouri & Rowney, 2014) as these interventions do not normally inspire commitment by the agent who may easily be demotivated by the constraints put on his/her autonomy and his/her subjective perception of not being trusted (as much as the agent would prefer to be). Hence, the agent is likely to behave in the desired way only as long as he or she believes that his/her actions are known to the principal and that the principal has the ability to sanction the agent's behaviour in a way that violates his/her interests. Trust, on the other hand, works in a very different, mutual commitment producing way, as it creates a moral obligation of the trustee to be worthy of the trustors' trust bestowed onto him or her. Nevertheless, we need to bear in mind that trust, although able to create commitment, is always by nature 'a leap of faith' (Moellering, 2001) and hence can always be betrayed.

Trust and control, however, are neither straightforward substitutes nor complements. Weibel (2007) investigates the relationship between formal control, trust and trustworthiness and uses self-determination theory to explain under which conditions formal control can improve rather than undermine the trustworthiness of the trustee. According to self-determination theory (Deci & Ryan, 2000; Weibel, 2007), the degree of value internalisation (as opposed to mere compliance) leads to trustworthy behaviour of the trustee (in a subordinate position) and hence justifies the trust given by the trustor (in a superordinate position). This is supported by contextual conditions that satisfy three essential needs of the trustee: the need for autonomy, the need for competence and the need for relatedness. In essence, if formal control is organised in a way so that autonomy is supported (by offering choice), competence is supported (by positive feedback and non-controlling information),

and relatedness is supported (by signalling care and benevolence), then formal control can be trust enhancing rather than trust-eroding. If these observations are valid for superordinate-subordinate relationships, then they should be even more important for professional contexts where competence and autonomy are key to professional identity.

These insights might help us to find a third way between the traditional self-responsible, highly autonomous and peer-oriented accountability model of the traditional liberal professions that has lost its support not least because of a number of high profile misconduct scandals in accountancy (e.g. the Enron case) and scientific research (for example, the case of Professor Hwang Woo-Suk – falsely claiming to have achieved a breakthrough in stem cell research by falsifying data in 2009), and the formal control heavy accountability model based on principal-agent theory that is widely used in NPM and that tends to undermine the commitment of the public employees called to account. Value internalisation, self-determination and trust versus compliance are also key to the distinction that Solbrenke and Englund (2011) make between professional accountability and professional responsibility. Solbrenke and Englund (2011: 855) argue that while, “the practices of ‘accountability’ are oriented towards control rather than trust ... ‘responsibility’ implies proactive action, which the professional initiates and voluntarily takes responsibility for in accordance with commitments embedded in the purpose of his or her profession.” They stress that they do not argue for, “a nostalgic view of the autonomy of the professions, with professionals held in awe and not required to account for their outcomes” (Solbrenke & Englund, 2011: 856), but for the creation of enabling conditions of a “social trustee professionalism” that combines and reconciles accountability and professional responsibility.

Having made the general case for an accountability approach that strikes a balance between accountability and professional responsibility, I will now turn the specific case of science and research to explore whether the type of accountability employed in the management of research at UK universities is more likely to help reduce research misconduct, or, is in itself a factor that could contribute to the misconduct problem that it should aim to contain using accountability as its core instrument.

## **Research Management, Value Internalisation and Trust in Research**

In theory at least, malpractice in science and research should not happen. A number of sociologists and in particular Robert Merton have investigated the normative basis of the science and research in the post-war period and have identified a set of norms that should ensure that scientists and academics have a very strong self-interest in research integrity. Merton (1973) has singled out four norms in particular, namely disinterestedness, communalism, universalism and organised scepticism.

The disinterestedness-norm should commit researchers to contribute to the advancement of knowledge in their field with their research for the benefit of society and not for pursuing their own personal financial gain. The communalism-norm should ensure that researchers share their findings openly with all members of the scientific community and with their students for the benefit of society. The universalism and the organised scepticism-norms finally should ensure that researchers scrutinise each other's work constructively, honestly and rigorously without regard of the career status and professional rank of whoever makes a claim to advance knowledge in their field. As and if all researchers are meant to believe in these norms and contribute to firmly establishing and promoting them in their midst, research malpractice should be a rare exception and trust among researchers as well as public trust in science and research assured. This should be even more the case if we also consider the different types of trust involved, the role of professional reputation as well as institutional-level safeguards, such as research funding organisations and professional bodies that have a strong self-interest in preserving their own and the privileged status of their members.

Hoecht (2004: 227–8), among others, explains how these factors should work together:

Research networks illustrate particularly well the relationship between academic credibility, reputation and trust. Academic credibility relies on openness and publication of research findings as only published findings can be scrutinised, peer-reviewed and credited to the research team that made the discovery (Merton, 1973). The credibility of researchers, the scientific community's trust in the validity of their research and, closely linked, their personal integrity or trustworthiness, tends to be directly related to their accumulated social capital in the research community: accumulated direct interpersonal experiences with other researchers (process-based trust), reputation (intermediated trust), academic peer-review and recognition by research organisations (institutional trust) all contribute to the professional standing of established researchers. The dimensions of trust are mutually reinforcing. From a certain level in a professional career, reputation or intermediated trust facilitates, or may even predetermine a positive outcome of peer-reviews for publications and research awards (institutional trust) and will lay the foundations for further opportunities to build process-based trust in select research circles and networks. As peer assessment is the key to academic and scientific careers, reputation becomes the most precious career asset and needs to be zealously guarded. Trust in professional competence and in the personal integrity and credibility of a researcher are very closely interwoven.

But we do know, on the other hand, and not only since high profile cases, such as the case of Hwang Woo-Suk in 2009, that research malpractice is unlikely to be just a rare and exceptional occurrence in an otherwise well-functioning system (see for example Martinson et al., 2006; De Vries et al., 2006; Fanelli, 2009). While it is difficult to know whether research malpractice has risen over the last decades with any real certainty as the detection rates are not known and may vary and similarly the media attention that research malpractice attracts, it is not unreasonable to assume that there is a problem with research integrity that merits further investigation.

A useful starting point is to explore whether the norms that have been identified as ensuring research integrity by Merton and others are (still) working well under the conditions of current research practice and research management in higher education. A number of developments may undermine Merton's norms of science, including:

- **The erosion of the norm of ‘disinterestedness’:** Career progression is increasingly based on the number and ranking of outputs. The easiest way to achieve this is by building networks that provide opportunities (conference tracks, specialist journals, panel memberships on funding bodies) and restrict access to outsiders (social closure). ‘Organised scepticism’ is held at bay via boundary control and the self-promoting and self-protecting behaviour of researchers (Anderson et al., 2007).
- **Limits to ‘organised scepticism’ and ‘universalism’ norms:** There is growing evidence that peer review, the cornerstone of the organised scepticism, and universalism norms are no longer functioning effectively (Fox, 1994; Hojat et al., 2003; Wood et al., 2004; Ren, 2009; Teixeira da Silva & Dobranski, 2015). Lower ranking journals increasingly rely on inexperienced reviewers while high-ranking journals can be reluctant to approve challenges to accepted wisdom that is the basis of their own reputation. Reputational capital can be a hindrance to new insights being admitted.
- **The size of networks, the role of cliques and the enforcement of norms:** The need for trust-based cooperation and trust-based accumulation of knowledge is more important than ever before, while the size of the research community has grown beyond the scope of familiarity-based trust, i.e. direct knowledge based trust and intermediated trust (professional group membership and reputation). The enforcement of norms that underpin trust depends on institutions and their willingness and ability to ‘police’ behaviour of their members (Fox & Braxton, 1994). This is not helped by replication and checking being considered a low esteem task that does not advance one’s career. The resultant low probability of detection and relative leniency of punishment makes cheating a rational choice for newcomers who wish to get promoted quickly. Established researchers have their reputational capital to lose but may feel safeguarded by the same.
- **The importance of professional socialisation in a profession under career pressure:** Internalisation of norms of professional behaviour depends on the quality of the socialisation experience of young researchers (Anderson et al., 1994; Braxton, 1991) and this in turn depends on the experience they have with the behaviour of PhD supervisors and senior colleagues in a ‘publish or perish’ environment. Their access to networks, which are so crucial for their career advancement may depend more on their supervisor and departmental prestige (Burris, 2004) and their strategic behaviour and impression management than on their competence and professional integrity.

If these observations are correct, then research integrity is under pressure mainly from the erosion of peer-review scrutiny (Lenz, 2014) and the crumbling of the mechanisms that ensure the internalisation and sustenance of professional values (see Ben-Yehuda, 1986; Hackett, 1994; Sztompka, 2007, for an overview over these and theories that attempt to explain research misconduct). This raises a number of interesting questions with respect to the relationship between accountability and research integrity. Firstly, it appears that the traditional self-referential accountability model for

the liberal professions, although it is the key component of accountability in research management (the reliance on peer-review processes), cannot be relied upon to sustain research integrity and hence public trust in research. Secondly, the alternative principal-agent-based managerial accountability model that has been increasingly employed in higher education research management, such as the Research Assessment Exercise/Research Excellence Framework in the UK, may have been instrumental in undermining the foundations of the traditional professional accountability model in research (Oancea, 2008) due to its emphasis on individual career achievement at the expense of communal professional norm development. Consequently, it can be argued that both the traditional professional accountability model and the managerial accountability model are no longer working sufficiently well to ensure research integrity and need to be replaced by a more robust approach.

In order to begin to sketch such an approach, it is important to understand how Merton's norms should in theory support trust in research and how this may be eroded by current common research management practices. Table 9.1 shows some of key actor-roles and responsibilities in research and how they relate to trust and professional norms. It also shows which norm-based behaviour should result from these norms in practice.

For example, journal editors should filter the manuscript submissions they receive by their quality and organise reviews of the manuscripts that they decide to accept for review by competent reviewers who have no conflict of interest or self-interest in their judgements. The norms this relates to are universalism (i.e. the status of who sent the manuscript should not matter), disinterestedness (i.e. the editor and the reviewers should not consider the potential impact of the submission on the standing of their own work), organised scepticism (i.e. rigorous, honest and constructive review) and general norms of professional behaviour as demonstrated by constructive feedback that is given within a reasonable timeframe. To the degree that journal editors are willing and able to live up to these expectations, they are able to foster trust in their integrity by being impartial, in their competence by making judgements on academic criteria that are clearly referred to, in their benevolence by ensuring that comments are constructive and not aggressive and dogmatic, and in their predictability by ensuring that feedback and decisions are given in a timely manner. However, as we have seen above, there are some grounds to question whether the peer review process organised by journal editors is consistently living up to these expectations (see above references on the quality of peer reviews).

## **Research Integrity and Professional Responsibility: A Need for Further Research**

We can see from Table 9.1 that norms, such as disinterestedness, organised scepticism and universalism, are very important norms that support the different categories of interpersonal trust within the science community. Although the table covers only interpersonal trust, these norms are also important for the maintenance of



**Table 9.1** Responsibilities of key actors in Higher Education research: Related categories of trust and supporting science norms

Actor	Responsibilities	Trust category	Demonstrated by	Important related professional norm
Journal editor	Filter submissions by quality and organise review by competent reviewers	(a) Integrity (b) Competence (c) Benevolence (d) Predictability	(a) Being impartial (b) Judging by academic criteria (c) Ensuring constructive comments are made (d) Timely processing of submissions	(a) Universalism (b) Disinterestedness & organised scepticism (c) Universalism & general professionalism (d) General professionalism
Peer reviewer	Impartial judgement of article or research grant to be reviewed	(a) Integrity (b) Competence (c) Benevolence (d) Predictability	(a) Being impartial, not judging by degree of support for own research (b) Only accepting articles own field of expertise (c) Making constructive comments (d) Reviewing within time limits and with care	(a) Universalism & disinterested (b) Disinterestedness (c) General professionalism (d) General professionalism
Doctoral student supervisor	Guide student's research, develop their research skills and research ethics	(a) Benevolence (b) Competence (c) Integrity (d) Predictability	(a) Care for student welfare as well as academic development (b) Accepting students only whose project falls with their expertise (c) Not claiming student's research achievements as their own (d) Having regular meetings, giving regular feedback	(a) Communalism & universalism (b) Disinterestedness (c) Disinterestedness (d) General professionalism
Individual researcher	Conduct research with integrity	(a) Competence (b) Integrity (c) Benevolence (d) Predictability	(a) Conducting research with the required skill and care (b) Not overstating or misrepresenting results (c) Not claiming other researchers' achievements for themselves (d) Being reliable when working with others	(a) Disinterestedness & organised scepticism (b) Disinterestedness (c) Disinterestedness & communalism (d) General professionalism
Senior academic/professor	Give guidance to less senior academics, conduct high quality research, exercise academic citizenship	(a) Integrity (b) Competence (c) Benevolence (d) Predictability	(a) Not claiming the work of others for their own & not creating closed cliques of peers (b) Not claiming expertise outside own area (c) Providing support based on merit without preference for own or close peers' career interests (d) Exercise peer review impartially and in timely manner	(a) Disinterestedness, communalism, universalism (b) Universalism (c) Disinterestedness (d) Communalism and general professionalism

system-level and institutional trust, which are ultimately upheld or undermined by the behaviour of individual researchers as constituent actors. One of Merton's norms in particular, the norm of disinterestedness, is important in this context. As discussed in this chapter, disinterestedness has a close link to the dominant principal-agent-theory based version of management accountability in that principal-agent theory stresses the importance of incentive alignment between principal and agent for the agent to behave as intended by the principal. In research management programs such as the national Research Assessment Exercise/Research Excellence Framework (RAE/REF) in the UK, a key feature has been a heavy emphasis on the use of performance targets expressed as research output (highly ranked publications and research grants) measured at the level of the individual as means to assess performance (Oancea, 2008). University employers have reacted to the RAE/REF assessment criteria by providing strong career incentives and professional opportunities based on these targets for their academic staff (Murphy & Sage, 2015) and by making hiring decisions to recruit new staff to boost their performance ranking. This has, as can be expected, contributed to a strong position of UK research in international university rankings, but may have come with some cost as well. From Table 9.1 we can see that creating a strong interest incentive for individuals to become self-interested rather than disinterested is likely to have significant adverse consequences for interpersonal trust within the academic research community and can undermine important professional values and the socialisation of new researchers to adopt these values. This is not to deny that research management has also had positive elements, such as the requirements imposed by research councils that research has to be publicly available and that negative research results should not be allowed to be kept secret, in particular in pharmaceutical research (communalism-norm). It also must be said that research management initiatives, such as the RAE/REF, do not aim to undermine collaboration between researchers. However, it appears that the internalisation of key communal values among researchers needs to be strengthened to counteract powerful self-interest motives created by the principals that could erode the basis of generalised trust in scientific research as a whole and would thereby defeat the principals' own key concern. What is needed, is a new balance to be struck between management accountability and professional responsibility and a rebalancing of research management practices so that individual career interest incentives of researchers are held in check by management practices that promote the development of professional norms of responsibility. Research on accountability in public administration and on the accountability of professional groups shows increasing awareness of the need to backtrack from an overreliance on performance targets, monitoring and control and to reintroduce conditions that enable the exercise of professional responsibility (Mansouri & Rowney, 2014; Olssen, 2016; Vriens et al., 2016). Further research is needed to investigate how this rebalancing can be best achieved in higher education research in practice. In this, Table 9.1 can be a useful initial conceptual tool for investigating in more depth the links between professional norms, categories of trust and conditions for accountability in research management.

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