Virtue Theory and Actuarial Judgement

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Abstract:

This paper outlines how the cardinal virtues (justice, prudence, self-control and courage) form a useful framework for understanding and developing the ethical aspects of professional practice. In both academic and professional circles, there has been resurgence in “virtue ethics”, which is as much concerned with matters of character as rules of behaviour and ultimate outcomes (which are the respective concerns of deontological and utilitarian theories). Virtue theory is a common sense approach to ethics that is effectively found in all the major beliefs and the professional traditions. The fundamental personal virtue is integrity: it ties our thinking to our words and actions, our motivation for action to its intrinsic rewards, and means to ends. This paper describes virtue theory, and how it can be applied in thinking about professional standards, and in education. Maclntyre’s view is that virtues can only be developed in a community of practice, which has a particular application to professional education. The theory also has implications for the understanding of actuarial judgement, and how it might be developed in the Educational process. The paper looks at how current concerns about “normative skills” that include communication and leadership can be addressed from a virtues framework. It also provides a basis for explaining the apparent crisis in the financial sector, locating some blame to the teaching of “positive” economics.

Key words: Professionalism, actuarial education, character

1 Introduction

There is widespread discomfort at the state of ethical behaviour in the finance sector particularly, with blame partly being apportioned to the education provided by business schools. This paper is based in large measure on Asher (Forthcoming) Working Ethically in Finance: Clarifying our Vocation where I try to sketch a coherent and comprehensive ethical framework that incorporates competence, character and contribution to the common good.

While there is agreement about the need for professional ethical education, there is much confusion and some disagreement about its content. The confusion arises from a proliferation of voices and vocabularies, and ethics, both individual and corporate, is thus too often seen as an arbitrary or subjective constraint on personal preferences and profitability.

Modern developments in virtue ethics can, however, provide the basis to reconcile apparently divergent theories of ethics, and can also explain the place of professional and legal standards. This paper briefly describes some
of these developments in virtue theory, particularly in the work of philosopher, Alasdair Macintyre (1999, 2007). It explores the four cardinal virtues of courage, justice, prudence (wisdom) and self-control, which together with the foundational virtue of integrity, which enable us to strive for the life well lived. It adds to these the professional virtues required by our education system. It then considers how this view can be reconciled to teleological (utilitarian) and deontological ethical theories – as well as fitting comfortably with the ethical imperatives of the major religions. Virtue ethics provides a common sense framework for talking about ethical education, professional practice and discipline, but stands against reductionist theories and views of reality, perhaps too often taught in economics and business management.

This paper addresses the questions of why ethics is problematic and, suggests that virtue ethics can provide a framework with which to embed ethics in actuarial education and regulation. It concludes by suggesting that virtue ethics also provides a basis for determining the quality of actuarial judgement.

2 Why ethics are problematic

Even if we agree they are necessary, why is it that we have difficulty with discussing ethics, in company or in the classroom?

2.1 Ethics are difficult to define …

It is true that ethical standards are poorly defined, universally debatable and seem impossible to measure. They therefore fall short of being meaningful in what philosophical traditions such as positivism regard as scientific. We do however need some criteria for determining what has value (is “good”) or there are no grounds for any enquiry or communication: positivism, for instance, ascribes value to science and understanding.

Ethical terms have limited precision. For instance, I may argue that justice is a universal standard, but there are seven definitions on http://dictionary.reference.com and they are largely interchangeable with equity, fairness and even righteousness. One reason for this is that the concepts have been used so widely and for so long, that there is no possibility of obtaining an unequivocal definition. Another reason is that while the standards apply absolutely in some circumstances, in others they have to be traded off against each other and allow for a variety of acceptable answers. The variety of vocabulary is inevitable. Even in science, we get a variety of usages. The other element of this imprecision is that even when they are applied, there may a range of acceptable behaviour. On questions of fairness, for instance, it is true to say that it is impossible give a precise range for a fair charge for the investment management of a $50,000 superannuation balance in a default fund. However, there is a range which
most people would agree was reasonable (say under 50 basis points) and one which all would agree to be extortionate: say over 3% pa. Drawing the line (or lines) is difficult, but it sometimes has to be done.

The second issue is that even precisely defined ethics with almost universal acceptance are still – by definition – not universally obeyed. They are aspirations as much as standards, measured against which behaviour may fall short. Those who fall short may not necessarily accept that they have done so, and may argue against the standards or their relevance, to avoid punishment, disapproval from their peers, or even to rationalise their own behaviour.

Finally, while even if it were possible to set limits to the unethical, and to evaluate ethical behaviour with some precision, it is not possible to measure people’s reasons and motivation for their behaviour. We cannot trust people’s own explanations because those who are not conforming may want to appear as if they are.

2.2 … but not impossible to enforce

On the other hand, those ethical standards that are seen as more socially necessary can be enforced against crimes against persons and property, and to ensure the performance of contracts. While the law is not all universally enforced, much is. Similarly, professional bodies enforce what standards of personal competence and integrity they have adopted.

2.3 Ethics are a personal challenge

External enforcement by the law or the profession is however a blunt instrument. It suffers from inconsistency, can make errors of omission and commission, and is often too late. It is personally unpleasant—whether we are judge, accuser or accused. It can only work if supported by a large majority or otherwise by force, and is vulnerable to capture by vested interests and to sliding community standards. Failed states and oppressive regimes illustrate why we want to live in societies with mutual respect and justice. The virtues describe what we want for the good life, however fuzzy the definitions.

Tangibly present in many discussions on ethical issues, is that while we may aspire to ethical standards, we fall short of our own aspirations. Any discussion that has direct application therefore has the potential for mutual recrimination, for stirring up feelings of personal guilt, and for displays of unpleasant criticism of others. Our talk can, therefore, easily be deflected into comfortable but anodyne platitudes. They can also become equally boring academic discussions of who thought what. Alternatively the hidden discomfort can be deflected into politics, which may get unpleasantly heated.
Avoiding the subject is not however the answer. Shu et al (2009) reaffirm, from experimental evidence, the long held view that “people routinely engage in dishonest acts without feeling guilty about their behavior” but “increasing moral saliency by having participants read or sign an honor code significantly reduced or eliminated unethical behavior.” We need a basic ethical training and regular reminders. We have them in the ethical component of basic actuarial training, in professional codes of conduct and in regular reminders in our mandatory continuing professional development (CPD) programs. This paper is intended to provide a framework in which to evaluate these structures, and to contribute to a common language to discuss them. It is particularly relevant as the IAA is in the process of an extensive review of its educational syllabus.

My favourite quote on educating for the virtues comes from philosopher David Carr:

... no really rational being could understand fully what a quality like courage, temperance, justice or compassion is and yet fail to want to possess it. From this point of view, since the virtues are not innate but entail both proper habit formation and the development of reason, it is clear that it is squarely within the responsibility of all concerned with the socialisation and education of children—parents, teachers and others—to ensure that such habituation and instruction takes place.

There are legions of young people, who ... continue to perceive what is admirable about virtue through the fog of lies that have been woven about her, and live lives of self-respect, decency, sobriety and genuine altruism. There are far too many others who have been blinded by the rhetoric, who have come to believe that morality is a matter of reluctantly doing one’s duty where this cannot be avoided, and otherwise going to the devil (1991, 255).

3 Virtue theory

This section describes traditional virtue ethics and how they are effectively captured by much common sense, and can be reconciled with most philosophical theories of virtue.

3.1 The cardinal virtues

The traditional virtues have been out of fashion for some decades for various reasons that are not explored here. One of the better known critiques was that of Kohlberg (1970), who criticised the traditional “bag of virtues” as lacking coherence, and restricting development as they were external and rule based (Hamm, 1977). I think Hamm is entirely persuasive in arguing that
Kohlberg’s rejection is of more of rules used by those in authority to unfairly dominate rather than the genuine virtues.

While MacIntyre, Carr, Hamm and many other defenders of the traditional virtues are at some pains not to attempt to impose any structure on the bag, I attempt in this section to provide something of a framework. This is not to say that the framework is complete, but rather it could be helpful to get a picture of the different functions, and the beauties of the different virtues.

The cardinal virtues

![Diagram of the cardinal virtues]

**FIGURE 1 THE CARDINAL VIRTUES**

The four cardinal virtues, which we have inherited from Plato, Aristotle and other classical philosophers, are self-control, courage, justice, and wisdom. Though ancient ideas, they are supported by recent research.

- Self-control curbs our personal appetites and cultivates (by practice), shapes our character and the habits of a good life. As self-regulation, it has been intensively studied by psychologist Walter Mischel and his collaborators. His work is summarised in *The Marshmallow Test*, currently an international best seller. He confirms that self-control is a character trait that can be developed, although its manifestation is situation specific, and finds that it leads to better academic results, earnings and longer marriage relationships.
Courage fulfils a similar role in protecting our character (who we are) and in defending ourselves against attempts by others to dominate us. There has been a little research of which Hannah et al (2011) is an example. Although not the intention of their research, they confirm that courage is a characteristic that can be recognised and that it can be encouraged by appropriate leadership. Mary Gentile (2010), although not writing explicitly about courage, covers how we can “give voice to our values” in difficult ethical situations.

Justice is traditionally defined as giving other people their due; treating them fairly. It is the social virtue that should govern the use of power over others. Asher (2010) sets out a traditional view of justice as a procedure that balances the interests of different stakeholders and seeks to maximise just deserts, equality, liberty, and people’s specific needs in an efficient manner. The paper then applies this to actuaries’ work in the design of benefits and social security systems.

Practical wisdom is making prudent decisions in the face of uncertainty. It requires both technical expertise in order to know the context, and the choice of appropriate criteria to produce a good decision. Asher (2013) discusses it in the context of the development of actuarial judgement.

Holding the virtues and indeed our lives together, is the virtue of integrity—indicated by the line around the diagram. Integrity is more than honesty, it concerned with “internal connections” between who we are, what we say and what we do, our motivation and our actions and means and ends. In an educational and work environment it is concerned with intrinsic motivations.

Why do we value the virtues? They do lead to the good life in ourselves and in society—all other things being equal—but they have value in themselves, so we pursue them for their own sake. They are promoted, and in cases required, by communities as the foundation of prosperity and peace, but they are also constitutive of personal growth, happiness and peace, so we shape ourselves to conform rather than see them as forced upon us. The virtuous person is one who has trained him or herself to want to do good.

The virtues justify themselves in that they are inherent in our natures as persons and members of society. Like our bodies become fit and healthy with proper food and exercise, and as mathematical capability requires proper training and personal application, so do self-control, courage, wisdom and justice. Peaceful and prosperous societies similarly require (indeed consist of) virtuous citizens and institutions.

3.2 Positive psychology’s findings

The convergence of values across cultures has long been recognised—MacIntyre applauds Thomas Aquinas’s (1275) harmonization of Greek philosophy and Christian theology, with reference also to Jewish and Muslim
views. Recent academic work from the field of positive psychology confirms that, while their interpretation and application varies across cultures, the cardinal virtues are universally recognised. Most interesting is the analysis of 120 question Values in Action Inventory of Strengths (VIA-IS) survey has been completed by over a million respondents from 75 countries. Robert McGrath finds significant convergence of responses: “Even the smallest correlation with the US profile of ranked strengths that emerged in this study meets the common standard for a large effect” (McGrath, 2015, 51). When he uses cluster analysis on a smaller sample (2014, table 5), he finds five clusters that can, with some adaptation, be identified with the four cardinal virtues and integrity:

<table>
<thead>
<tr>
<th>Cardinal virtue</th>
<th>McGrath (2014) Table 5 mapping</th>
<th>Comments (see also discussion below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justice</td>
<td>Interpersonal: <em>Fairness</em>, Forgiveness, Kindness, Receptivity, Teamwork, Modesty, Love</td>
<td>Kindness and Love are classified as transcendent by the VIA website. Forgiveness is classified under Self-control, but can be seen as a behaviour to be learnt, rather than control of emotions.</td>
</tr>
<tr>
<td>Courage</td>
<td>Emotional: Humour, Social IQ, Creativity, Bravery</td>
<td>Humour is also correlated with the Justice cluster; Creativity with Wisdom. Their correlation with Courage suggests that they are also needed to express it.</td>
</tr>
<tr>
<td>Wisdom</td>
<td>Intellectual: Intellectual Pursuits, Love of Learning, Beauty, Curiosity</td>
<td>This cluster does seem to need Perspective and Judgement if it is to refer to Wisdom as normally understood.</td>
</tr>
<tr>
<td>Self-control</td>
<td>Future Orientation: Positivity, Future-Mindedness, <em>Self-Regulation</em>, Spirituality</td>
<td>Positivity and Future-mindedness make up the transcendent virtues of Hope while Spirituality, or Faith, is another.</td>
</tr>
<tr>
<td>Integrity</td>
<td>Restraint: Judgment, Perseverance, Perspective, <em>Honesty</em></td>
<td>Judgment is defined as “actively seeking other points of view” so better seen as Integrity rather than Wisdom. Perspective however seems to belong mainly with Wisdom.</td>
</tr>
</tbody>
</table>

The questionnaire does not ask people to group the virtues but to identify their own values. The results arise because people who have the one virtue in the cluster think that they also have the others rather than whether they see them as similar. The strengths within each cluster are thus mutually supportive. The results are however suggestive of how we might reframe our understanding of the nature and benefits of the classical virtues.

The VIA website itself maps their list of virtues onto six virtues (the cardinal virtues without Integrity plus Humanity and Transcendence), based on previous cluster studies. McGrath (2015) argues that his analysis is more appropriate. The main differences are that the Theological cluster is
incorporated into the other clusters; Perspective moves from the Emotional cluster to Restraint; and Prudence (defined as the avoidance of risks) becomes negatively loaded on the Intellectual and Emotional clusters—perhaps it is seen as the opposite of Creativity.

Seeing the Transcendent virtues as representing a higher level of the cardinal virtues is perhaps more appropriate in a pluralistic world. Kindness and love are surely a natural further step for those on the path of treating people fairly. Positivity and Future-mindedness similarly would seem to be in a natural extension of the Self-control that aims purely at moderating excesses, which finds confirmation in Mischel’s work. Spirituality can perhaps be divided into mindfulness and faith, with only the latter remaining to separate the believer in the supernatural from the non-religious.

The role of Integrity needs further elaboration. It is not traditionally classified as a cardinal virtue, and can be classified one or other. In the VIA-IS study, Perspective—said by McGrath to be a simile for wisdom—loads primarily in the Restraint cluster, and secondarily onto Courage. Perseverance has a strong secondary loading onto Self-control. Judgment might be expected to tie in with justice, as requiring consideration of alternative points of view. These overlaps are however consistent with seeing Integrity as a separate unifying virtue that requires intellectual insight with a wide perspective and the courage to act for both personal and social good. We come back to consider its interwoven nature with the other virtues, when talking about actuarial judgement.

3.3 Reconciliation with other cultures and theories

Differences in values across different cultures is often seen as an obstacle to the teaching of ethics as it suggests that the values are arbitrary and would therefore be wrong to impose on others—especially the young.

Apart from the VIA-IS research, one of the nicest refutations of this view comes from the International Actuarial Association (IAA). Remembering that the IAA has affiliates in 92 countries, the Professionalism Committee (IAA, 2014) confirms that they agree on ethical standards of integrity, independence, trustworthiness and the obligation to act in the public interest. While recognising differences in emphasis, “There do not appear to be material or cultural differences in views on what is ethical. No such differences have emerged during discussions in the Professionalism Committee, nor has anyone challenged this assertion..." (7)

Even if the professionalism does not mention the personal virtues of courage, wisdom and self-control, it is seems self-evident that the last two are (or at least ought to be) pre-requisites for passing the examinations.
To press home the point, it is perhaps worthwhile to refer to other work that confirms this.

- As discussed above, the virtues originate with classical Western thought and have been central to Christian thinking since the thirteenth century at least.
- Wade (2010) finds them paralleled in Islam and Buddhism.
- Dahlsgaard et al (2005) also find the virtues in Hinduism.

There are academic theories—from Philosophy, Psychology, Economics and Sociology—that suggest an alternative basis for ethics, although seldom actually address or criticise virtue ethics. They do not necessarily represent a problem.

MacIntyre argues (as have others before him and since) our moral development takes place in communities of practice—with their particular laws, traditions and myths (or stories). Starting afresh is not an option: displaying arrogance or naivety. I agree with McCloskey (2006), when she argues that modern discussions of ethics are unhelpful (perhaps also dishonest and irrelevant) when they fail to refer to the ancient virtues, and be addressed to communities of practice. As we have seen above, whether religious, legal or professional, they all have standards that can be reconciled to the traditional virtues. Of the two main groups of ethical theories often listed as alternatives to virtue ethics, it seems to me that both can be dismissed as reductionist as standalone theories. Deontological theories concerned only with the rightness of action, and teleological theories concerned with the success of the outcomes are plainly inadequate on their own. We need a world view that covers who we are, what we do and why we do it – as in Figure 1.

Lest it be thought that I am denying the existence of virtuous unbelievers, note that of those listed in the bibliography, John Braithwaite is explicitly atheist while Michael Sandel seems to avoid any reference to his religious views. They both refer to “republican virtues”, which include all but transcendence.

### 3.4 Cognition and conation

Virtue ethics also provides a more satisfactory explanation for ethical failures than theories that fail to address not just ignorance but perversity. Conation refers to the will: our ability to make decisions to change our own behaviour, to pursue alternative goals and to make a contribution to the common good. If really does not matter if we believe in free will or not. Even if we believe that we are participating in a totally determinist dance, we cannot
but think and act as if we are free agents at some significant level, or we succumb to fatalism.

Theories, which assume people will behave ethically if their understanding is extended, deny the reality of those who have not chosen to train themselves to choose the virtues. Mischel’s work is particularly helpful here as it identifies the processes of developing the virtue of self-regulation, which is obviously self-serving and should not need the persuasion that might be required by more altruistic virtues. There are genetic, family and social links to greater self-control, but education can have a difference—and people can be seen to make choices.

Should we chose not to develop the virtues, it is entirely just that we should suffer the consequences. If the consequences are entirely private, then governments have no business interfering in the lives of others. To the extent that the actions have public consequences, communities have the right to regulate behaviour. To the extent that people can be encouraged to develop the virtues that will lead to more prosperous societies with less anti-social behaviour it is wise and just to educate in the relevant virtues. The education requires not only cognitive development, but the development of a proper appreciation of the virtues. There is no point in giving knowledge unless students are both willing and able to critically evaluate and apply it. The need to develop the willingness often seems to be neglected.

What virtue ethics emphasises is that such broad education is beneficial both to the person and society – whether by design or evolution, the virtues are good for us on almost every level.

4 Developing the virtues

What is clear from experience (and hopefully from the above) is that, although the virtues are inherent within us, they do not develop spontaneously. This raises the question to what extent it should be incorporated in the actuarial education system, including CPD.

4.1 An explicit framework

In the first place, we need an explicit framework setting out the nature of virtue. If we are to incorporate the values of integrity, professionalism and concern for the public interest in our standards, we must be prepared to discuss the personal and social reasons for doing so, and show how they apply to or any attempt to make them concrete in the practical work of actuaries. Failing to do so is to imply that we do not understand the reasons or do not believe them. Of course, actuaries do differ on the interpretation and meaning of some of the standards, and the differences need to be acknowledged.
This paper is offered as a starting point from which to develop such a framework, suggesting that virtue ethics provides a structure that covers the main ethical issues, while also using concepts that can be harmonised with the main religious and secular world-views that different actuaries may hold. Integrity and the four cardinal virtues (as illustrated by Figure 1 or introduced in some other way) can and should explicitly explained and applied.

4.2 A structure for professional skills

The actuarial education needs more than the cardinal virtues, but the framework underlying Figure 1 can be adapted to the required professional skills as in Figure 2. The social and technical skills in the two boxes on the left are what we want to develop in ourselves; we want to relate well to others and to make good judgements as reflected in the boxes on the right, and continue to the have same objective of human flourishing as indicated by the arrows. These skills correspond more or less to what Lowther et al (2009) identify as the “capabilities and values” that they find in the actuarial literature on what makes for a suitable actuarial education. The “normative skills” map fairly closely onto Figure 2.

The professional skills

![Figure 2: The Professional Skills](image)

- Virtues are largely aspirations not rules
- We acquire them by reflective practice
- Communities can encourage them and shame their absence
- They bring a sense of identity and self-efficacy
- And we have to learn to deal with human error...
4.3 Embedding in actuarial education

There may not be much to teach about the virtues in the abstract before descending into platitude, but there is a lot to say about how they play out in practice. One

Table 2 suggest how both the professional and cardinal virtues could be incorporated into the subjects required by the current syllabus of the IAA. The suggestions are discussed in a little more detail in the appendix. The details are not that important, but the need to draw the connections between theory and practice is essential.

**TABLE 2: EMBEDDING THE VIRTUES**

<table>
<thead>
<tr>
<th>0. Introduction</th>
<th>Professional virtues</th>
<th>Cardinal virtues</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Financial Mathematics</td>
<td>The framework of cardinal and professional virtues</td>
<td></td>
</tr>
<tr>
<td>3. Economics</td>
<td>Communicating uncertainty</td>
<td>Wisdom – facing uncertainty</td>
</tr>
<tr>
<td>4. Accounting</td>
<td>Motivating people</td>
<td>Justice – social and economic</td>
</tr>
<tr>
<td>5. Modelling</td>
<td>Working in formal &amp; informal teams</td>
<td>Integrity</td>
</tr>
<tr>
<td>7. Actuarial Mathematics</td>
<td>Communicating in conflict situations</td>
<td>Courage</td>
</tr>
<tr>
<td>8. Investment and asset analysis</td>
<td>The profession and the public good</td>
<td>Social objective: financial security</td>
</tr>
<tr>
<td>9. Actuarial Risk Management</td>
<td>Communication and system design &amp; cognitive biases</td>
<td>Social objective: capital allocation</td>
</tr>
</tbody>
</table>

4.4 Induction into the community of practice

Pellegrino (2002) proposes the professionals are those who have made a personal commitment that has led to their membership of a community of practice.

On this view professionals make a “profession” of a specific kind of activity and conduct to which they commit themselves and to which they can be expected to conform. The essence of a profession then is
Entry into the community requires both intellectual growth, and a redefining of our identity our view of our vocation. The intellectual process is described by Cousin (2006) as being the result of learning the “threshold concepts”. These are critical ideas that lead students into identifying with a discipline and adopting its ways of thinking. They have a “transformative” and “irreversible” impact on the students’ thinking. Pellegrino makes the point that the induction into the community needs to include exposure to professionals whose own characters somehow reflect the community and its values. This is clearly illustrated in the fact that the qualification is not a certificate but a fellowship in the profession. We are much more likely to say “I am a qualified actuary”, than “I have an actuarial qualification”, with the latter suggesting that the person has not practised. The implication for the actuarial profession is that it should not undervalue exposure to other actuarial professionals both at university and in the years of practical experience required. Particularly if they are in non-traditional employment, students who are less likely to work closely with senior actuaries will need more structured meetings with actuarial mentors.

4.5 Continuing salience

Even if people have an intellectual framework to which they have actively committed, we need regular ethical reminders, and we have them in some measure not just in the actuarial training, but also in our professional events, publications, guidance, codes of conduct, and threats of discipline and legal sanction. The question arises as to whether the salience of the cardinal and professional virtues be increased within the actuarial culture?

Carr (1991) puts store on stories that can inform and inspire: case studies if you prefer. These can be important not only in encouraging virtues but also in developing expertise as suggested by Flyvbjerg (2006), who writes of experts operating “on the basis of intimate knowledge of several thousand concrete cases in their areas of expertise.” Helpful on this score are Ferris (2006, 2012) and De Jong and Ferris (2006). Case studies, or “war stories” as they were repeatedly called in the discussion of Stott’s (2006) paper on peer review, are difficult to share for reasons of confidentiality. One possibility is to create the space for anonymous reporting, perhaps along the lines of the “agony aunt” columns that have had some success in the professional journals. Another possibility is for the journals to explicitly welcome case studies, and perhaps career reflections from retiring actuaries.

There is also perhaps a need to be more aware of the virtues in professional publications and policy submissions. The following might be raised:
• Whether integrity is not undermined by some of the puffery with which the profession is “marketed”.
• Whether our submissions observe justice in ensuring that they do not serve the interests of the industry rather than the public, particularly the most vulnerable. Support for tax concessions is an egregious example.
• Whether the perpetual search for new fields and the wider application of actuarial skills can be considered wise, when our expertise in the area may be relatively flimsy and the search diverts effort from our major social responsibilities in the traditional areas. There are areas where we can add value: financial risk management in banking and health insurance perhaps most obviously.

4.6 Responsive regulation and restorative justice

Developing ethical responsibility includes regulation. Virtue ethics is aware of people’s tendency to fall short, and the need to support their best aspirations at all time. John Braithwaite (1995) describes an approach to regulation that is explicitly based on the view that the role of regulation is to bring the best out of people, and if they need to be disciplined, to rehabilitate rather than punish—without diminishing responsibility to make good any harm that has been done.
Responsive regulation is self-regulation in the first place; people or organizations are responsible for themselves, ensuring that they do no harm to themselves or others. Figure 3 sets out the ideal:

"The left hand side of the pyramid represents the stances that can be adopted by taxpayers … (Braithwaite, 1995) … The right hand side presents the pyramid of regulatory strategy which is described in … (Ayres and Braithwaite, 1992)."

Where does the profession stand in regards to the Pyramid? On the right hand side, in Australia, there is a little enforced self-regulation by the Institute, and some relatively discretionary command regulation by APRA. In the UK, there seems to be less discretion. On the left hand side, one does not really know: actuaries appear to be fairly accommodating, and require little active regulatory involvement if we measure it by reported cases of professional misconduct.

Are our standards high enough though? This is not the place to debate the issues but there are two areas that might merit more discussion. Stott (2006) and the discussion suggest that peer review might be more extensive, although not in the excruciating detail sometimes found in statutory peer reviews that be phased out. The other area is CPD, which continues to enjoy a relatively low profile in Australia, where there appear to be no public cases of reprimands as have occurred in the UK. This is not to advocate such reprimands, which may not be that restorative: perhaps the profession could be more active in audit and reminders. The UK Institute and Faculty of Actuaries’ (2014) “Stage 3 Professional Skills Training – for Experienced Members” makes an attempt to make the professional’s ethical commitment salient by consisting solely of two hours exposure to some ethics related cognitive activity. It could perhaps be more widely emulated.

Finally, we could ask whether the disciplinary process is restorative. There might be an argument that the processes we have could be more active and less punitive. Certainly there may be space for a process that specifically excludes legal representation, but cannot lead to a penalty without starting another and completely separate process.

4.7 The inadequacy of positive economics

Before concluding, it is worth recording that there is widespread unhappiness at the results of a general business education as set out for instance in Navarro (2008). Many believe that some of the failure of ethical formation results from the absence of any ethical element in positive economics, as argued by Ghoshal (2005), who comments that this is based on a scientific model that:
has demanded theorizing based on partialization of analysis, the
exclusion of any role for human intentionality or choice, and the use
of sharp assumptions and deductive reasoning. Since morality, or
ethics, is inseparable from human intentionality, a precondition for
making business studies a science has been the denial of any moral or
ethical considerations in our theories and, therefore, in our
prescriptions for management practice...

The profession has to take some care that its recruits are not exposed purely
to such reductionist thinking. Embedding ethics in the curriculum as
suggested in this paper, could perhaps be a start.

5 Conclusion: actuarial judgement

It has been suggested that virtue ethics could potentially reconcile the main
religious and secular world views with actuarial professional standards, and
that it can therefore provide a more coherent framework with which to
introduce ethics formally into the actuarial professional education system.

The framework includes integrity; the cardinal virtues of justice, wisdom, self-
control and courage; and the professional virtues of self-management, social
skills, appropriate communication and teamwork, as well as the intellectual
and technical skills. These values should be embedded in the actuarial
syllabuses for maximum effect.

Angus Macdonald (1997) rightly criticises the use of actuarial judgement as
“mysticism and guesswork”, when it is used an excuse for not taking the effort
to investigate a problem thoroughly or to avoid giving reasons. It is suggested
here that good actuarial judgement can really only be exercised by the
qualified actuary trained in both the cardinal and professional virtues. Such a
judgement needs more than technical knowledge and skills; it needs to be
based on appropriate self-organization and may well require social and
managerial skills to implement effectively. To meet ethical standards, it must
be just in considering all stakeholders, be wise in identifying context and the
possible consequences of alternative actions, and may require courage to
implement at all. An actuary needs therefore to be schooled in these virtues,
and committed to them.

If we are to develop the virtues more effectively in our students, we need to
embed them more formally into the education structure. There is also
perhaps further work to be done in developing a more ethical actuarial
culture. Firstly, the virtues become more salient if we can share more fully
case studies that reflect both ethical and professional skills. Secondly
professional discipline could be more pro-active in encouraging peer review
and CPD compliance in a restorative manner.
References


Aquinas, Thomas (1275) Summa Theologica Translated by Kevin Knight 2006 http://www.newadvent.org/summa/


Carr, David. (1991) Educating the Virtues. Routledge,


Gentile, Mary C. Giving voice to values: How to speak your mind when you know what’s right. New Haven, CT: Yale University Press, 2010.


Appendix: Embedding the virtues in the IAA curriculum

0. Introductory first course

If there is an introductory course it can give an overview of the virtues and the actuarial profession into which the student has begun the process of induction.

1. Financial Mathematics

This can provide an introduction to self-management. One way is to incorporate a financial plan indicating how much to save for retirement.

This course deals, inter alia, with the mathematics of consumer credit which is an area of debate on what constitutes a fair profit – a major issue in business ethics. It is therefore a good place to introduce the concept of justice. As a case study, one can consider the overcharging of late fees by banks, which has been found to be extortionate in some jurisdictions. Questions of pricing in insurance also lend themselves to discussion of this question.

2. Probability and Statistics

Students will not fully understand statistics if they do not understand the differences between risk and uncertainty, and this course needs to underline the importance of developing judgement in the face of uncertainty. This should include the difficulties of communicating uncertainty – and various obstacles to understanding. One can also emphasise the need not to fall for “mimicry” or rote learning.

3. Economics

Macroeconomics obviously raises questions about social justice, and the trade-off between desert, equality, need, liberty and efficiency.

If the principal/agent problem is raised, this leads to an obvious discussion of executive remuneration, personal motivation, and how one creates conditions of motivation within organizations.

4. Accounting

This course naturally lends itself to the question of working together in organizations. It should cover the structure of formal teams and include a team exercise, but also discuss how to collaborate with class mates in all university courses.
Appropriate reporting is partly an issue of integrity, and so this course is the appropriate place to discuss personal and corporate integrity – particularly the issue of the manipulation of accounts and reserves. The Giving Voice to Values cases would be invaluable.

In this context, there is a place for a discussion of cross cultural communications and of basic oral communication.

5. Models

This course requires a balance between complexity, clarity and accuracy and the virtue of parsimony, requiring the exercise of judgement. Judgement also requires clarity as to one’s values and objectives, and the development of wisdom.

The UK Technical standards cover data, modelling and reporting, and so provide a good introduction to professional standards and their implication for self-management the management of others, as well as professional written communication.

6. Statistical methods

This course is concerned with the management of risk, and the point can be made is that is not the same as the avoidance of risk. It therefore provides the possibility for a discussion of courage, which involves taking the right risks for good reasons. This is related to some ability to negotiate what may be strongly held differences of opinion, and conflicts with superiors – and the need and dangers of whistle-blowing.

There is some risk that this discussion will seem out of place and thus be rejected by the students, unless it incorporates something of the material of subject 8. This can however be included in the discussion of ruin theory, which is introduced in here.

7. Actuarial Mathematics

This course requires a knowledge of insurance products and design and is the place to discuss the provision of financial security which is the main social function of the insurance and superannuation industries, and the role of actuaries in ensuring that the industry is effective in doing so. This can also include the issues of moral hazards and their management, and leads to a discussion of regulation and management of free riders in the creation of public goods.
8. **Investment and asset allocation**

The social role of investment management is the allocation of capital within society, and this course can emphasise this aspect of the insurance and superannuation industries.

This course will recap the economics and accounting courses and provides opportunities to discuss product and economic regulation in the face of cognitive biases.

9. **Actuarial risk management**

The management of risk is an ethical issue because both are concerned with the prevention of harm, although virtue theory is more concerned with the creation and development of the good. This more positive orientation is recognised in most texts dealing with Enterprise Risk Management – and this course provides a place to consider the role of both risk avoidance and creativity.

10. **Professionalism**

As a capstone, this courses will recap previous material from previous subjects. It could consist largely of case studies that include professional ethical issues.

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i My first Google hit gave a Wikipedia illustration: “In statistics, the term precision can mean a quantity defined in a specific way. This is in addition to its more general meaning in the contexts of accuracy and precision and of precision and recall.”

ii www.actuaries.org/index.cfm?lang=EN&DSP=CTTEES_TFSR&ACT=TERMS

iii She is the editor of my book and the Director of an international program for business ethics education, which can be found at: http://www.babson.edu/Academics/teaching-research/gvv/Pages/home.aspx.

iv This can be covered by the cases in the Giving Voice to Values website mentioned in note 4 above.

v Taken from Australian Taxation Office (1998), p23