

Systemic Control, Cultural Values and Religious Institutions

An Assessment of Semi-Automatic Human Values Systems Analysis in Religious Institutional Diagnostics

Larry Stapleton*, Dawton Marques**, Tejan Thakar ***

* *INSYTE Centre, Waterford Institute of Technology, Cork Road, Ireland
(e-mail: LStapleton@WIT.ie)*

** *INSYTE Centre, Waterford Institute of Technology, Cork Road, Waterford, Ireland
(e-mail: e-mail: dawtonmarques@gmail.com).*

** *INSYTE Centre, Waterford Institute of Technology, Cork Road, Waterford, Ireland
(e-mail: tejanthakar.sndt2008@gmail.com).*

Abstract: Investigations of systems engineering failures from the aviation, nuclear and other sectors demonstrate the link between human factors and technical failures which may have lessons for other institutions. The term “safety culture” refers to background factors which impinge upon safety management systems, drawing particular attention to cultural features of organisations and these impinge upon effective control and risk management processes. Is it possible to formally or semi-formally analyse qualitative institutional cultural traits? This paper presents findings of a study in which automatic systems are used to provide an ethically-informed values analysis of a large values-driven institution. Tests showed that the system was capable of gathering, processing and presenting robust values congruency data capable of exposing deep axiological traits which may be out of alignment in a religious institution. Implications are drawn for control systems research, limitations are exposed and future research directions presented.

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1. INTRODUCTION

The past years have witnessed international systems failure across banking institutions, religious institutions and governmental systems. The continuing failure of national and international institutional systems is clear evidence that systemic problems are not being addressed at root and that, perhaps, some of these institutions are out of control and require a review of the ethics which should inform their behaviours (Stapleton *et al* (2014)). Given the importance of these issues it is ponderous as to why control and automation engineering does not contribute more tools and methods to help manage and regulate institutions, especially in terms of ethics and governance, with attention given to the values and priorities of leadership teams. Outside control and automation systems academia, catastrophic institutional failures have been subject to major studies into the reasons for the failures and the mechanisms by which they may be better regulated as organisations (e.g. Keenan (2012)). Only quite recently have institutions as socio-cultural systems attracted attention from control systems engineering researchers (Stapleton (2015),

Stapleton & Marques (2016)). These considerations raise the question: *what values inform organisational and management behaviour in these communities?* This question typically takes considerable and deep analysis in order to unpack the underlying principles which inform and guide behaviours and attitudes. Deep human values have remained a topic of interest for anthropologists (e.g. Kroeber (1952)), social psychologists (e.g. Rokeach (1979)) and axiologists (Fronzizi (1970)). Perhaps due to the complex and “soft” nature of values as traditionally understood, few control engineering or information technology researchers have reviewed the possibility that computer-based online systems might be constructed which can provide insight into the deep values at work in management, in leadership or in a community. In other words, human values have not attracted much attention in the control and automation literature, even though these are the heartbeat of human behaviours and attitudes. This paper contends that control and automation systems research can provide tools which can significantly improve our analytical capability when it comes to human values. In order to demonstrate this, the authors designed, developed and tested a semi-automated system designed to provide important human values data

for a large religious community. The study speculated that this human values data could be used, for example, in the regulation of risk in religious communities. The remainder of this paper sets out the background research, summarises the online system and shows a sample of results that were gleaned from the system. We show some strengths and weaknesses of the approach and point towards future work in this emerging field. This paper's central question is:

RQ: Can a formal (semi-)automated methodology be set out which enables interested parties to analyse human values data from religious communities?

2. BACKGROUND: CONTROL SYSTEMS, ETHICS AND "SAFE" ORGANISATIONS

IFAC has a long and well established track record in ethics research. The Stapleton and Hersh (2003) paper identified important power dynamics which are at work in society to shape the engineering ethics discourse, focussing upon codes of ethics (for example) rather than more systemic approaches which see how power dynamics and other human factors might work themselves out in the organisation to create ethical challenges. It might be reasonably speculated that control and automation systems thinking be applied to resolving this challenge using formal or semi-formal techniques and analyses. What will be needed is some systemic approach which can expose fault lines in institutions which, in turn, might be precursors to systemic failure and lead to an organisation becoming unsafe or out of control in light of its core purpose. Other areas of systems engineering have also paid attention to the impact of ethical lapses at a systemic level, and have noted important background factors including the organisational culture and leadership styles. Safety scientists have long known of the importance of human factors in the catastrophic failure of engineering systems. Investigations into hazards and disasters in aviation (Hudson 2001a), rail transportation (Fruhen et al. 2013), nuclear (Mariscal, Herrero, and Otero 2012) and other sectors emphasise the importance of human factors and, especially, a "safety culture" which is embodied in the broader organisational culture. In a mature safety culture (known as a generative culture (Hudson 2001b)) safety management systems are aligned with and expressions of an organisational culture which is profoundly concerned with safety in all aspects of its life.

From an ethics perspective, rather than focus upon ethical codes of practice aimed at individual punitive action in the event of non-compliance, they take a systemic approach to ethical lapses, examining how ethical failures might have occurred as a result of systems level failures. In what Hudson (2001a) called "generative" cultures, ethics becomes a control metric, a feature of the excellent quality of its management systems. Instead of a focus on "who is responsible" the systems of ethics takes a "we are all responsible" outlook. Within engineering there is a body of literature which might be a basis for understanding the institutional challenges explored here. A technology and

method which provides insight into the deep values at work in the substrate of a culture can, in turn, uncover deep seated background factors which provide antecedents to risky and unsafe practices and ethical lapses.

3. INSTITUTIONS, VALUES AND CULTURE

Human social groupings need to be recognised and accepted in the eyes of broader society as legitimate and institutions fulfil this role (Selznick (1996)). Society will either be openly hostile to non-legitimate groups or ignore them because they do not recognise them. Institutions are symbolic entities, imbued with a set of values which they must display as emblems of their broader legitimacy in society. They will simply have no social existence if they do not proceed in this way. Institutions are comprised of their own internal culture which in turn is informed, amongst other things, by values which usually operate below the level of language (Hofstede et. al. (2010)). In mature safety cultures safety and risk management are guiding principles in the life of the organisation. Cultural values which inform these social arrangements operate at 3 levels (Cowan & Todorovic (2001)):

1. Espoused Values: this is the set of values which the institutions presents formally to itself and the environment and which comprise things like mission statements, core values stated on web sites etc.
2. Hidden Values: sometimes called "the smell of the place" are values evident in the norms and customs which people adopt. They may be manifested in dress codes (casual or formal dress) and other social cues.
3. Deep Values: Deep below the surface institutional cultures develop a gestalt pattern of interacting values which reflect the reality of organisational life as it is lived & ways in which power works in the institution.

People are socialised into these deep values over time. In large institutions like religious orders or national banks these values may be institutionalised through socialisation processes including education (seminaries for example) and through hero figures. Socialisation and other tactics create subtle, but very real pressure to conform to the unspoken norms and values of the organisation. Stapleton *et al* (2014) raised two important questions in relation to this theory of culture in respect of systemic institutional control:

1. What if the institutional values are out of synch with society's expectations, norms and values in respect of the institutional context within which it operates?
2. What if the 3 levels are not in alignment?

We argue that control and automatic systems engineering is one of the few disciplines that can potentially identify and formalise the systemic nature of institutional failure. Tools and techniques are needed which can help formally identify

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