Impact case study (REF3)

REF2021

Institution: University of Glasgow (UofG)		
Unit of Assessment: UoA17 Business and Management Studies		
Title of case study: Managing Organisational Risk and Vulnerability		
Period when the underpinning research was undertaken: 2006–2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): (1) Denis Fischbacher-Smith	**Role(s) (e.g. job title):** (1) Research Chair in Risk and Resilience	**Period(s) employed by submitting HEI:** (1) 2006–present
Period when the claimed impact occurred: 2017–2020		
Is this case study continued from a case study submitted in 2014? No		

1. Summary of the impact

Fischbacher-Smith's research has enhanced the theoretical and empirical understanding of hazards, risk and crises at the interface of organisations and technology and has developed models to guide more effective practice. The methods and findings of this research have impacted directly on vital areas of business practice and public policy. First, it has contributed to developing effective strategies, processes and decisions to identify unexpected and threatening events, manage associated risk pathways, and alleviate security vulnerabilities in: (a) a global management consultancy providing a service to Fortune 500 companies increasingly using internet and streaming services; (b) one of the world's largest online trading companies. Second, the research has provided an analytical lens for the continuing investigation of organisational relationships and technology assessment for the Grenfell Tower Inquiry into a catastrophic London fire—the UK's biggest post-war Public Inquiry.

2. Underpinning research

The management of risk and uncertainty, and their relationships with the onset of crises, have become increasingly important within organisational governance. However, there are often fundamental gaps in the understanding of the relationships between decision-making under conditions of uncertainty (which include the management of risk as a form of calculative practice) and the generation of vulnerabilities within socio-technical systems. These processes and practices have the potential to lead to conditions of crisis. Fischbacher-Smith's research has addressed gaps that exist in our understanding of these relationships and developed practice-based interventions that are designed to mitigate those potential vulnerabilities.

This extensive programme of research across a wide range of service sectors, including corporate business, military systems and public security, has addressed two principal dimensions of this shortfall in our understanding. The first is an examination of the still-evolving theory of crisis incubation, including the role played by organisational conceptions and approaches to the management of risk and uncertainty. The scope of this analysis has also included: the ways in which technical expertise is utilised in the management of that uncertainty (especially in those cases where risk is seen as a form of measurable uncertainty and is therefore perceived to have a strong degree of predictive validity); the processes by which crises transition from one system state to another; and the manner in which risk and uncertainty are dealt with in complex decision-making contexts.

The second dimension concerns the provision of corporate training and advice around organisational security across a range of potential threat vectors. This includes the role played by internal threat actors (both accidental and deliberate) in the generation of vulnerability and the protection of organisational assets. The scope has included: evaluating the impact of management decisions on shaping vulnerabilities within the organisation, the impact of external threat actors in exposing that vulnerability, and the ways in which organisational practices can serve to generate the conditions through which those trusted insiders can generate harm and threat. This includes staff at both the operational and managerial levels of the organisation.

The findings from this research that have the most significant direct application to practice include:

1. Dynamic models of the crisis process that reflect:
    a. the interaction of hazardous events and their associated probabilities as contextualised within a practice setting;

b. the ways in which crises transition from one phase to another, including by both impacting on management and being impacted on by management;

c. the protective elements that organisations can utilise as a means of addressing the potential for these crises **[3.1, 3.2, 3.3, 3.4, 3.5, 3.6]**.

2. The challenges that have to be addressed in pre-planning a range of crisis scenarios and viable contingency plans that incorporate these models **[3.1, 3.6]**.

3. The contribution to effective risk management made by the identification, assessment and communication of risk and uncertainty **[3.4, 3.6]**.

4. The problems associated with designing processes to capture and act upon early warning and near-miss information **[3.4, 3.6]**.

5. The challenges presented by inter-agency working across different organisational cultures, practices and processes and particularly the dislocation between coordination and control within complex socio-technical systems under conditions of crisis **[3.1, 3.4, 3.5, 3.6]**.

3. References to the research

3.1. Fischbacher-Smith, D. (2017) When organisational effectiveness fails: business continuity management and the paradox of performance. *Journal of Organisational Effectiveness: People and Performance*, 4(1) pp. 89−107. (doi:10.1108/JOEPP-01-2017-0002)

3.2. Fischbacher-Smith, D. (2016) Breaking bad? In search of a (softer) systems view of security ergonomics. *Security Journal,* 29(1), pp. 5−22. (doi:10.1057/sj.2015.41)

3.3. Fischbacher-Smith, D. (2015) The symbiosis of failure: the strategic dynamics of risk and resilience. In: Andersen, T. (ed.), *Routledge Companion to Strategic Risk Management*. Series: Routledge Companions in Business, Management and Accounting. Routledge. pp. 157−174. (ISBN 9781138016514).

3.4. Fischbacher-Smith, D. (2014) Organisational ineffectiveness: environmental shifts and the transition to crisis. *Journal of Organisational Effectiveness: People and Performance*, 1(4), pp. 423−446. (doi:10.1108/JOEPP-09-2014-0061)

3.5. Fischbacher-Smith, D. and Fischbacher-Smith, M. (2014) What lies beneath? The role of informal and hidden networks in the management of crises. *Financial Accountability and Management,* 30(3), pp. 259−278. (doi:10.1111/faam.12038)

3.6. Fischbacher-Smith, D. (2016) Framing the UK's counter-terrorism policy within the context of a wicked problem. *Public Money and Management*, 36(6), pp. 399−408. (doi: 10.1080/09540962.2016.1200801)

Evidence of research quality: Outputs **[3.1]**, **[3.2]**, **[3.4]**, **[3.5]** and **[3.6]** are published in international double-blind peer-reviewed public policy journals. Output **[3.3]** is a chapter in a peer-reviewed edited book from a high-reputation academic publisher.

Research Grants and Developmental Funding include:

1. Fischbacher-Smith, D. (2015), MarCE project: Ergonomics of military systems. Defence Science and Technology Laboratory, Ministry of Defence. Award Value GBP130,000.

2. Fischbacher-Smith, D. and Fischbacher-Smith, M. (2013), RCUK Global Uncertainties Impact Support Fund 2012/13. Award Value GBP4,944.

3. Smith, D. and Fischbacher, M. (2008-2012), 'Under dark skies: Port cities, extreme events, multi-scale processes and the vulnerability of controls around counter terrorism', EPRSC EP/G004889/1. Award Value GBP365,156.

4. Smith, D., Crawford, J., Pidd, M., Bell, S., and Winfield, A. (2007-2011), 'Biological metaphors and crisis: building self-healing, emergence and resilience into critical infrastructures', EPSRC EP/E062865/1. Award Value GBP342,988.

4. Details of the impact

4.1 Pathway to Impact

Fischbacher-Smith has followed a strategy of engaging with communities of practice in order to co-design research inquiries (via a mode 2 approach to research) and to translate his research findings on risks and crises at the interface of organisation and technology into improved resilience and risk management for organisations, along with enhanced public safety. This engagement strategy has included sustained involvement in the global risk and crisis management community of professional practice, including in the European Security Awareness Special Interest Group (SASIG), the Barton Summits in the USA, and Cyber Security Connect UK's international professional meetings. As reported by the SASIG, for example, the world of practice appreciates Fischbacher-Smith for, *"the significant addition [his] academic research brings to the overall corporate knowledge of the cybersecurity sector"* **[5A]**.

This strategy and its research base have led to personal invitations to apply this research to significant organisations in the public and private sectors. Three prominent examples demonstrate the significance of this research impact on: (a) two global corporations seeking to protect their employees and internet users across the world from extreme harm; (b) one of the biggest UK public inquiries of recent times. Further, they exemplify the reach of the research impact across the world and into the highest forums in which public and corporate policy are formulated.

4.2. Impact on a Multinational Management Consultancy's Internet and Streaming Services

Fischbacher-Smith was contracted by BakerMcKenzie, a leading US law firm, acting as counsel to one of the world's largest international management consultancies (which cannot be named under the terms of a confidentiality agreement governing attorney-client privilege). This management consultancy acts on behalf of three global, internet-based Fortune 500 companies to monitor and remove egregious content from the internet. These companies have been making increasing use of streaming services with a concomitant need to moderate content in the face of the more frequent appearance of extreme images of heinous acts, hate speech and other incitements to violence, including among vulnerable populations.

Barton LLC, a crisis and insider threat consultancy in the USA that, through its associate base provides high quality research-based inputs into Fortune 500 Companies, was the US-based co-ordinator of the academic research group on this project. It confirms that, *"Fischbacher-Smith was selected to be the only European representative on a five-person international academic team and to use his research, particularly on viable contingency plans and risk communication, as the basis of advice on how to manage the impacts of egregious content on employees and contractors"* **[5B]**. It also confirms that, *"Fischbacher-Smith's contribution was in terms of his research on risk and uncertainty within organisations and their links to crisis events, the impacts of exposure to images and the interventions needed to address those impacts, and the design of such organisational interventions and organisational controls to mitigate adverse consequences […] Fischbacher-Smith also provided existing research outputs into the discussions with the clients as a means of supporting their changing organisational practices"* **[5B]**.

Their research-based report on suggested changes to the practices of managing these risks was formally submitted in March 2020 **[5C]**. Barton LLC confirms that, *"Many of the recommendations and insights [Fischbacher-Smith] designed have been adopted by the consultancy and client companies, helping to meet the objective of a safer internet for all"* **[5B]**. Specifically, 18 of the 21 recommendations have been implemented (with the remaining three being put on hold due to COVID-19 restrictions in the workplace) **[5D]**. The consultancy has changed its global working practices by:

1. Adopting a more structured approach to the design of content moderation and the development of a robust and universally applied minimum specification for the delivery of the service.

2. Changing the design of the workspace in which the egregious content was reviewed and assessed as well as changing shift patterns so as to avoid night-time work where the impact of the content is likely to be greater.

3. Enhancing the existing welfare processes that are in place and increasing awareness of them so as to deal more effectively with early warnings of adverse consequences amongst staff.

4. Enhancing the training and onboarding of new staff to incorporate issues around the perception of risk and uncertainty associated with content moderation and the potential opportunities for intervention to mitigate harmful impacts.

4.3. Impact on a Multinational Trading and Logistics Corporation's Organisational Security and Insider Threats

Again working with Barton LLC under a confidentiality agreement, Fischbacher-Smith's research impacted on the training of the European and Global security teams for one of the world's largest and fastest growing logistics companies. He, *"designed and delivered a series of research-based training inputs to one of the world's largest corporations that held summits of human resource, security, legal and environmental leaders in Ireland and in Great Britain. The work focused on crisis prevention and recovery in relation to the potential damage arising from internal threat actors to the working population"* **[5B]**.

This impact was based specifically on his research findings on risk models, viable contingency plans and communication of risk and uncertainty. The impact comprised:

1. The development of training around a security ergonomics approach to the design of the organisation's risk and security function specifically to enhance early warnings of potential hazards and the responses to them.

2. Changes to organisational practices to give wider recognition of the nature of threats and their *modus operandi* and the potential development of radical ideological and theological characteristics amongst employees. *"The impact of this research-led training on the company was considerable and led to changes in operating protocols around early warnings and near-miss events"* **[5B]**.

3. *"Provision of security research-based training to Federal, State, and Local Law Enforcement in the USA around the dynamic nature of threat vectors developed by hostile actors and the role played by the processes of radicalisation in shaping the nature of those threats"* extended the consideration given by the agencies to the threats associated with public spaces and the advice given to public groups in the event of such incidents **[5B]**.

4.4. Grenfell Tower Inquiry into the catastrophic London fire

Recognising the significance of his research for its investigation, the Grenfell Tower Inquiry appointed Fischbacher-Smith as external advisor to Phase 2 of the Inquiry in 2019−2020 **[5E]**. Its Chairman confirms that, *"Professor Fischbacher-Smith was appointed as an external expert to advise the Inquiry on its investigation into the response of central and local government to the fire at Grenfell Tower. The appointment was based on his professional standing and followed an extensive search and interview process"* **[5F]**.

The scope of Fischbacher-Smith's work on central and local government responses to the fire are set out in the Letter of Appointment **[5E]**. His analysis has examined relevant legislation, regulations and National Resilience Guidance, the London and local government arrangements, and the mechanisms of response. The Chairman further confirms that, *"As part of his role, Fischbacher-Smith was required to read some 600 items of evidence obtained by the Inquiry and produce a report identifying potentially important areas of investigation. That report ran to some 58 pages (approximately 21,500 words). The advice given in the report was based on his expert knowledge in this field"* **[5F]**. The report to which the Chairman refers was completed in March 2020 and drew on Fischbacher-Smith's research to provide an analysis of the causal factors in the Grenfell catastrophe and the challenges associated with responding to it. The report is not yet in the public domain as the Inquiry, which has been delayed for twelve months

by the pandemic, has not allowed public dissemination of commissioned reports until it publishes its findings **[5F]**.

4.5. Conclusion

The above examples, drawn from a larger portfolio of sustained work of this nature, show Fischbacher-Smith's commitment to research on risk and resilience and its translation into corporate settings, as well as to continuing efforts that advance public safety. Given the dramatic changes in communications technology, managing organisational resilience has acquired heightened salience, providing new opportunities for business and people but also generating new threats to both. Business and government practices that focus exclusively on cost minimisation, at the expense of risk and resilience, can inflict massive societal damage. Fischbacher-Smith's research translates into significant impact because it explores complex trade-offs in a practice-focused way, brings insights to the public discourse of some of the most challenging issues of our times, and directly improves the well-being of user communities such as global businesses and those impacted by the Grenfell Tower Inquiry. As Barton LLC observes, *"it is difficult if not impossible to fully measure the lives saved and post-traumatic stress reduced in the workplace and in society because of this body of work."* **[5B]**.

5. Sources to corroborate the impact

[5A] Letter from the Chair and Founder of the Security Awareness Special Interest Group (SASIG) (18 February 2020) *[PDF available]*.

[5B] Letter from Barton LLC (confirms the impact associated with the contributions to both the international management consultancy and the trading and logistics company) *[PDF available]*.

[5C] Report: Barton, L., Beidel, D., Fischbacher-Smith, D., Friedman, A. F., Shelby, J., *An analysis of the working conditions of content moderators and their implications for stress and trauma within the role* (at the time of submission of this Impact Case Study the report remains subject to commercial confidentiality restrictions) *[PDF available on request from the HEI]*.

[5D] Confirmation that 18 of the 21 recommendations to the Management Consultancy on internet and streaming services have already been implemented, with three being on hold because of the COVID-19 pandemic *[PDF available]*.

[5E] Confidential Letter of Engagement to the Grenfell Inquiry (25 July 2019) from the legal team at the Grenfell Tower Inquiry (confirms engagement as an expert advisor and the terms of reference for the report. The Inquiry is still progressing and is, therefore, subject to legal constraints) *[PDF available on request from the HEI]*.

[5F] Statement from the Chairman of the Grenfell Inquiry on the appointment of Professor Fischbacher-Smith as Advisor to the Inquiry (at the time of submission of this Impact Case Study, the Inquiry, which has been delayed for twelve months by the pandemic, has not allowed public dissemination of commissioned reports, including that referred to by the Chairman: Fischbacher-Smith, D. (2020), *The Response of Local and National Government in the Immediate Aftermath of the Fire*. London: The Grenfell Tower Inquiry) *[PDF available]*.

Mitigation Statement evidence:
[5G] (i) Grenfell Tower Inquiry Update (24 January 2020); (ii) Grenfell Tower Inquiry Update (28 January 2021) (confirms delays as a result of the COVID-19 pandemic) *[PDFs available]*.