MORE CONVERTS INTO RASMUSSEN? – IMPACT OF A STORY-BASED ANIMATION ON SYSTEMS SAFETY
[Symposium: Rasmussen revisited at ODAM2017]

Gyuchan Thomas Jun
Loughborough University, Loughborough Design School, Human Factors and Complex Systems Research Group, Loughborough, UK
g.jun@lboro.ac.uk

Rui Liu
Loughborough University, Loughborough Design School, Loughborough, UK

Un plus grand nombre de convertis à Rasmussen? L'impact d'une animation vidéo racontant un événement sur la sécurité des systèmes

SOMMAIRE : Cette recherche vise à évaluer l'impact d'une animation vidéo de 10 minutes portant sur deux points de vue divergents d'un accident de traversier survenu en Corée du Sud. La vidéo a été produite pour faire connaître la sécurité des systèmes et diffuser le contenu auprès d'un plus vaste auditoire.

PROBLEM STATEMENT: Our understanding of how complex systems fail has made huge progress over the past sixty years from Heinrich's domino model to present-day thinking on systems safety, to which Jens Rasmussen made huge contribution. The lack of awareness of systems safety among many stakeholders in the society often leads to a counter-productive blame culture, as shown in the aftermath of the South Korea ferry accident and many others. Therefore, there is an urgent need to educate/communicate the latest systems safety thinking to a wider audience.

RESEARCH OBJECTIVE / QUESTION: This research aims to evaluate the impact of a ten minute story-based animation, Two Contrasting Views of the South Korea Ferry Accident, which was produced and disseminated to introduce systems safety to a wider audience.

METHODOLOGY: Data was collected and analysed from multiple sources: digital analytics (# of views, average view duration, geographic location and demographics of viewers) and qualitative comments (online and emails). Online questionnaire was also used with 112 Chinese and 39 British to investigate whether the animation changed their views on accident causation and accountability.

RESULTS:
The animation was created from the close collaboration between a human factor research team and an animator. Three main messages on systems safety were included in a real accident scenario: i) complex interactions between contributing factors rather than simple linear interaction; ii) human as asset rather than threat; iii) just culture rather than blame culture. Since the official roll-out on 13th July 2015 (1.5 years so far), the animation has been viewed approximately 30,000 times around 70 different countries for 2 min 55 sec average view duration. The animation received positive comments declaring that they will use the animation for student teaching, professional training and client discussions. Some urged that people at all levels should watch and digest it. Surprisingly, the responses from Korean audience were more negative than elsewhere criticising it for misrepresenting the causes of the accident and giving unfair excuses to those involved in the accident. From the

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online questionnaire, significantly increased awareness of system issues was found in both Chinese and British participants. However, it was found that British participants were more optimistic about lessons learned from holistic accident investigation and just culture helping improve safety while Chinese participants were more skeptical about the importance of accident investigation and still believed in importance of holding people accountable.

DISCUSSION:

Two possible explanations for the more critical responses from Korean/Chinese viewers might be a pre-existing hierarchical culture of Chinese/Korean society and post-traumatic stress at the Korean society level in the aftermath of the accident. First, South Korea and China have a culture that is characterised by relationships ordered by status and a strong sense of shame. In such a culture, holding people accountable by blaming them is widely-accepted and considered effective. On the other hand, a more complex, counter-intuitive and paradoxical systems safety concept might have been a challenge to be accepted. Second, the politicized aftermath with various versions of conspiracy theories on the accident in Korea could have made the Korean public weary of listening to another version of explanation about the accident through our story-based animation.

CONCLUSIONS:

This study shows that use of new media (animation, film, etc) can be effectively used to disseminate important systems safety messages to a wider audience. However, a careful consideration should be given to duration of animation, cultural background of target audience and choice of the story.