Lost in Translation? The Pedagogical Implications of Safety-II

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ABSTRACT

Introduction:
Our contribution to the workshop relates to the following points from the workshop brief:
- The relevance of Safety-II for individual and organisational learning.
- Limits and difficulties of implementing Safety-II practically and conceptually.

About Us:
The Philosophical Breakfast Club (PBC) http://www.thephilosophicalbreakfastclub.org.uk is a not-for-profit organisation dedicated to the creation of safety solutions in risk critical industries through cross-industry collaboration. We draw extensively on our associations across multiple risk industries and beyond, including the Education Profession and Elite Sport. We are first and foremost a group of front-line professionals and trainers in safety critical professions so our perspective of Safety-II (S-II) is as *field experts*.

Our Proposal:
We would like to present our insight into the *pedagogical* challenge that S-II poses to training professionals. Much gets lost in translation as understanding of S-II makes its way towards the front-line operations it has an impact on. Training is perhaps the most obvious translational activity in any skill-based profession, yet the underlying *pedagogy* of safety interventions is poorly understood and largely overlooked. This leaves many training providers *expecting* and *assessing* something they are not effectively training.

Whilst S-II occurs naturally as a result of adjustments made to changing conditions in the real world, it is not yet sufficiently described in a format that translates directly to adaptive behaviour *control*. If the effect could be recreated and enabled in the training environment, where it is inherently safer, novices could emerge at performance levels equivalent to far more experienced operators. We see this as a primary challenge for S-II both conceptually and practically.

There appears to be considerable overlap between Safety-II and well-established understanding in specialist fields outside risk professions. In elite sport for example, it has long been recognised that systems and technical mastery do not always equate to success in the field of play. The effect is considered independent of physical talent and ability, and a wide variety of interventions have been developed and tested. If equivalence can be established then useful application lessons could be learned from others and directly translated into safety critical industries.

To facilitate S-II in a training context, the training role itself would need to adapt and change. S-II challenges traditional views of training as a predominantly instructional activity and asks us to be teachers, coaches and mentors. Looking forward, the identification and development of training *talent* along with *curriculum design* are likely to be important considerations. Technology such as simulation, virtual reality, eye tracking and brain training is increasingly offering solutions and providing alternative options.

Currently, the predominance of Safety-I (S-I) in training (compliance, systems and procedures) limits the scope of S-II as a training outcome because their opposing objectives (behaviour constraint versus behaviour variation) can work against each other. Resolving this issue would require a mindset shift in attitudes towards failure and error since the development of adaptable resilient behaviours is largely dependent on *learning from error*. A focus on pedagogy could facilitate translation of S-II into real world application by making the concept more accessible to training professionals in practical ways and by giving front-line practitioners the ability to control the effect.

Our presentation will summarise some of the research, theory and practical experience pertinent to the above. We would value comments and thoughts from the audience on the relevance to S-II and potential for transferable applications. The following are some of the key questions we feel need to be resolved.

Questions for Further Discussion:

- Nearly all the emphasis in our organisations is on S-I. *To what extent does S-II get lost in translation when interpreted by regulators, managers, trainers and field operatives?*
- The underlying pedagogy of safety interventions is under-researched and largely overlooked. *Is this seen as a missing link for S-II?*
- In a training context, S-I and S-II are significantly different challenges. Pedagogically, it is the difference between non-contextualised drill practice and highly contextualised pressure practice. *Can current training curriculums be expanded to accommodate both?*
- Learning from error is a powerful way to train adaptive behaviour. *To what extent does the intolerance of error in a blame culture limit the acceptance of S-II as guiding practice?*
- To facilitate S-I and S-II in a training context, the training role itself should be regarded as a performance activity in its own right. *Do our organisations have the resources to support the level of professional development required?*
- There is considerable overlap between S-II and well-established understanding in specialist fields outside risk professions. *To what extent are collaborative opportunities being explored?*

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