

Departmental Seminar

Temporal Binding of Cause and Effect

4:00 p.m. – 5:00 p.m. | November 28, 2019 (Thursday)

Chamber, 11/F, The Jockey Club Tower | Centennial Campus | The University of Hong Kong



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Abstract

Temporal Binding refers to the mutual attraction in subjective time between a cause and its effect (Haggard et al., 2002, Buehner, 2012): When people observe a causal relation unfold and have to report either the elapsed time between cause and effect, or the point in time at which either the cause or the effect occurred, judgments are distorted. Specifically, subjective time appears shorter in causal compared to non-causal intervals, and causes appear to have happened later and effects earlier (i.e. their temporal distance contracts) when compared to two-event sequences that are not causally linked.

Even more striking than Temporal Binding is the related phenomenon of Causal Re-ordering (Bechlivanidis & Lagnado, 2013, 2016), which refers to a subjective reversal of temporal order in line with causal beliefs: When viewing a variation of Michotte-style collisions where object A moves towards object B, then object C moves, followed by B (ACB), people tend to erroneously report having seen ABC. This effect cannot be reduced to post-perceptual response bias or lapses of attention and manifests as online shifts in points of subjective simultaneity (PSS).

Both effects suggest that the relationship between experienced time and causality is bi-directional: Not only does temporal evidence inform causal inference, but causal knowledge in turn impacts our experience of time. In this talk I will present a series of studies examining the underpinning of these effects and will explore their implications of theories of time perception and our sense of agency.

~All are Welcome~

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