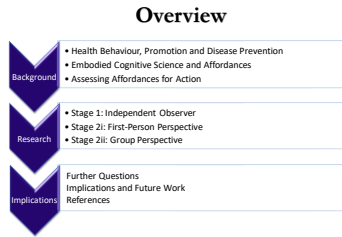


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Health Behaviour, Promotion and Disease Prevention

Social cognition models:

- Intentions as a predictor of behaviour, cognition precedes behaviour, decision making planned and rational.
- Low predictive validity (Sheeran et al., 2012)

Dual process models: unplanned behaviour (Hollands & Dickinson, 2018)

- How do these behaviours occur?

Behavioural economics: irrational choices and 'nudging' (Thaler & Sunstein, 2008)

- Why does nudging work?

Post hoc meta-regression of behaviour change interventions: effective (Michie et al., 2012)

- Why do some techniques work and others do not?

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Embodied Cognitive Science and Affordances

Challenges to mainstream cognitive psychology:

- Traditional cognitive science and representationalist social cognition models dualistic and self-fulfilling.
- Perception and action are inseparable, should be understood in terms of situated action (Gibson, 1986).

Gibson's ecological psychology (1979):

- Affordances: directly perceived action potentials, represent meaning.
- Inherently relational, located at the relation of objects within the environment and the dispositional characteristics of an individual (Dewey, 2002).
- Individuals act upon canonical (first-order) meanings of an affordance.
- Based upon context and individual's history of experiencing the culturally normative uses of the object in similar contexts.

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Assessing Affordances for Action

- Can contemporary ideas about affordances and embodied cognitive science explain risky alcohol consumption in context?

Challenges for Theory:

- Moving beyond the limitations of mainstream psychological theory and health behaviour models to provide a testable theory of affordances and perception-action hypotheses.

Challenges for Methods:

- Observing and assessing relational affordances which cannot be independently observed.
- Investigating complex social and health risk behaviours: typically simple perception-action relations i.e. grasping, climbing stairs or catching a ball.



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Stage 1: Assessing Affordances – Independent Observer

Aim: How effective is the affordance concept for assessing the functional characteristics of licensed premises where alcohol is consumed?

Method: A non-participant observational study in seven different UK licensed premises.

- Systematical and evaluative approach of affordances by an independent observer.
- Qualitative data analysis: established a coding and categorisation framework for affordances, functional taxonomy and visual maps.
- Findings:** illustrated a range of potential affordances for promoting or inhibiting alcohol consumption, related to the environmental organisation and opportunities for action provided by others.

Limitations: Objective third person perspective, their inter-dependency with environment (perceptions, capabilities and history).

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Stage 2i: Alcohol-Related Affordances – First-Person Perspective

Aim: Understanding the individual subjectivity that exists between young adults and their drinking environments.

Method: Photo-elicitation interview, analysed using Interpretative Phenomenological Analysis (Smith, Jarman & Osborn, 1996).

- Twelve individuals with a broad range of drinking behaviours viewed 50 photographs from 7 different licensed premises.
- Asked to comment on the different opportunities for drinking behaviour that were present and those that were not.

Findings: Confirmed Stage 1 alcohol-related affordances, provided insight into individual subjectivities, or meaning certain features had for drinking behaviour.

Limitations: Indirect measure of subjectivity, viewed visual representations of unfamiliar premises, described behaviour based on experiences in similar environments, group viewpoints?

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Stage 2ii: Alcohol Subjectivities and Q-Methodology – Group Perspective

- Stage 1 and Stage 2: varied concourse of alcohol-related affordances.
- Quali-quantological assessment of subjectivity.
- 40 participants ranked 60 statements along a symmetrical grid, based on perceptions of their drinking behaviours in relation to their drinking environments.
- A preliminary analysis of these rankings and post-sort interviews uncovered four factors, or group patterns of subjectivity.

Fisher's System of opaque systems applied to the statements for a bipolar concourse

	Factor 1: Conscious & Complicit?		Factor 2: Aware & Autonomous?	
	High (+)	Low (-)	High (+)	Low (-)
Aware ability	100.00	0.00	100.00	0.00
Communicate with ability	100.00	0.00	100.00	0.00
Control ability	100.00	0.00	100.00	0.00
Listen to ability/Observe ability	100.00	0.00	100.00	0.00
Peer ability	100.00	0.00	100.00	0.00
Participate ability	100.00	0.00	100.00	0.00
See own ability	100.00	0.00	100.00	0.00
View ability	100.00	0.00	100.00	0.00
View rating/Observe ability	100.00	0.00	100.00	0.00

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Factor 1: Conscious & Complicit?
15 light-moderate-heavy, 10 F, 5 M, aged 18-33. Aware of influences, believe they drink more when grasping their drink, listening and dancing to music, when alcohol access increased by longer opening hours, influenced to buy from interesting looking promotions, but happy to ask for soft drinks.

Factor 2: Aware & Autonomous?
14 rare-light-moderate, 6 F, 8 M, aged 18-31. Do not believe their drinking behaviour is influenced, placed great emphasis on view-able/communicate-with-able affordances, i.e. not affected by bar staff or friends, promotions or the layout of drinks behind the bar.

Factor 3: Unaware & Unanimous?
5 moderate, 2 F, 3 M, aged 19-26. Unaware of influences, emphasised access-able/communicate-with-able affordances, overcome limited access to alcohol by buying many drinks at once, focused on group dynamic, pressured into drinking and buying rounds by friends, but if one person does not drink they do not.

Factor 4: Canonical & Concerned?
2 rare-heavy, 2 M, aged 22-27. Concerned with appropriate drinking behaviours given context, drink less in premises set up for eating, or if there are rules, regulations, order and table service, links to canonical?

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Implications and Future Work

- Three different methods, each with limitations, provide a triangulation of results for assessing affordances for action.
- Provides scientific support for embodied, cognitive science, while contributing towards a useful theory of affordances for health behaviour.
- Further scientific research could elaborate and test the affordance theory for a range of health risk behaviours (i.e. smoking, unhealthy eating, gambling etc.).
- Could inform public health policy by providing a more robust theoretical perspective on behavioural determinants of health, particularly for environmental and contextual factors.

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Further Questions...

- Indirect measure of subjectivity, accurate reflections of experience? Do we really know why we behave? Price?
- How do promotions influence behaviour? Optic array from a picture stimulus provides same functional information as an object?
- Could affordances prevalent in certain social environments be primed? (i.e. social networks, 2020)
- If canonical affordances are important for health behaviour, how does this change our understanding of dual process, behaviour economic and behaviour change models?
- As a global theory of behaviour, an acceptance of affordances or direct perception is not enough, requires conceptual and methodological re-tooling (i.e. 2020)

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