Perry et al. (2015): Personal space

Lesson 1.4.2 | Concepts and methods

1. Psychology and aim

Personal space/interpersonal distance: preferred spacing between people. **Empathy:** responses to others' experiences. **Oxytocin (OT)** is a hormone involved in social processes. The social-salience account proposes enhanced processing/importance of social cues, not universal friendliness.

Test whether OT affects preferred interpersonal distance differently for people with higher versus lower empathy. Predictions: closer distances with OT for higher empathy, greater distances for lower empathy.

2. Participants and design

Initially 54 male Haifa undergraduates, aged 19-32 (mean 25.29), received course credit/payment. Extreme IRI scores defined analysed empathy groups: **20 higher (at least 40), 20 lower (at most 33)**. Empathy was measured, not manipulated.

Mixed design: treatment within participants; empathy between groups. Participants attended twice, one week apart, at the same day/time, receiving 24 IU intranasal OT or saline placebo. Double blindness reduced expectations; task order was counterbalanced. A 45-minute wait preceded tasks.

3. Measures and tasks

The Interpersonal Reactivity Index (IRI) has 28 items across perspective-taking, empathic concern, personal distress and fantasy. It was completed online at the first appointment after administration.

Experiment 1: animated Comfortable Interpersonal Distance task. A friend, stranger, authority figure or ball approached along one of eight routes. Pressing the spacebar stopped approach at a comfortable point.

Experiment 2: choose between room pictures for an expected later personal conversation. Pairs varied chair distance/angle or table-plant distance/angle; 168 presentations. No actual conversation followed.

> CID scores are percentages of the route remaining: larger means farther away. Room-choice chair distances are centimetres. Do not mix the two units.

Perry et al. (2015): Personal space

Lesson 1.4.2 | Evidence and interpretation

1. CID: stimulus mattered

Approaching stimulus	Mean route remaining (%)
Stranger	39.82
Authority	34.12
Ball	20.20
Friend	12.46

These means combine groups/treatments. Stranger distances were greatest; friend/ball did not differ reliably as a pair.

2. CID: treatment and empathy

Group	Placebo (%)	OT (%)
Higher empathy	26.11	23.29
Lower empathy	26.98	30.20

The means moved in predicted opposite directions, but the simple empathy-by-treatment interaction was not conventionally significant. A supported more complex interaction also involved stimulus type. Separate overall group drug effects were not significant.

3. Room choice: preferred chair distance

Group	Placebo (cm)	OT (cm)
Higher empathy	80.58	78.07
Lower empathy	78.33	80.14

One higher-empathy participant had technical problems, so Experiment 2 analysed **39 people**. The chair-distance interaction was supported; table-plant preferences did not show it. Neither empathy group alone showed a conventionally significant treatment difference.

Chair distances ranged 20-140 cm in 20 cm steps; table-plant distances 200-320 cm. Angles were 0°, 45° or 90°. Placebo task scores correlated modestly: r = +.278.

Conclusion: OT-related preferences depended on empathy and the social task/stimulus. Do not simplify to "OT significantly made every high-empathy person closer" or "OT makes everyone sociable".

Perry et al. (2015): Personal space

Lesson 1.4.2 | Evaluation and connections

1. Strengths

Placebo and double blindness: reduced treatment expectations and experimenter cues.
Within-person treatment comparison: each participant served as his own comparison, reducing stable individual differences.
Task controls: standardised stimuli, counterbalanced task order and a non-interpersonal furniture condition improved interpretation.

2. Limitations

Restricted sample: male undergraduates and extreme IRI groups limit transfer to other people or the middle of the empathy range.
Indirect behaviour: computer figures and pictured chairs do not reproduce live encounters fully.
Complex evidence: modest samples and uncertain simple effects require careful interpretation. Significant interactions are not the same as significant separate drug effects in each group.

3. Ethics

Written consent, screening and institutional approvals were reported. No significant physical, local or systemic side effects were observed. Participants expected a later personal conversation that did not occur, involving deception; the study's purpose was explained after both visits.

Biological administration requires screening and monitoring. Questionnaire and personal-preference data require confidentiality. An absence of reported side effects does not replace these safeguards.

4. Debates and application

Person and situation: measured empathy, changed treatment and social stimulus jointly matter. This is a clear interaction example.
Nature/nurture: a biological treatment is not a test of genetic inheritance; the origins of empathy were not established.
Application: consider individual/context differences in social-space research. The study did not test a treatment or establish one ideal seating distance.

> Remember the sample sequence: 54 recruited; 40 in extreme-empathy comparisons; 39 in the room-choice analysis. Keep the denominators attached to the result.

Hint: An interaction means the relationship between one factor and the outcome depends on another factor. State the factors and the evidence, not just the word "interaction".