**The Impact of Extinction on Evaluative Learning via Intersecting Regularities.**

Intersecting Regularities is a new route for changing liking. In a typical IR procedure, individuals perform a task in which they learn that valenced and neutral stimuli are related to each other via one (or more) elements in operant contingencies that intersecting with one another. For instance, a first operant contingency might consist in pressing a red button (R1) in the presence of a positively valenced source stimulus (S1) that leads to the presentation of a neutral outcome (O1). Then in a second contingency, pressing a yellow button (R2) when a neutral target stimulus is present (T1) leads to the exact same outcome (O1). Participants may evaluate neutral target stimulus (T1) more positively than they used to do due to the fact that the two operant contingencies intersect each other in terms of a common outcome (i.e., positive source (S1)🡪 red button (R1) 🡪 neutral outcome (O1); Neutral target (T1) 🡪 yellow button (R2) 🡪 neutral outcome (O1)). The effectiveness of evaluative learning via IR has been demonstrated on both implicit and explicit attitudes (Hughes, De Houwer & Perugini, 2016). So far IR studies have only focused on forming evaluations. However, an important aspect of (evaluative) learning is how to change evaluations once they’ve been formed. In Evaluative Conditioning (EC), one way of altering evaluative responses is via *extinction*. The aim of the present contribution is to investigate whether extinction can also change recently formed evaluative responses in an IR context.

**IR and Extinction**

In EC, extinction refers to an experimental procedure containing two sequential phases. In the first phase (acquisition), the individual is exposed to a contingency between two stimuli - a conditioned stimulus (CS) and an unconditioned stimulus (US). The second phase (extinction) consists of the mere presentation of the CS, without contingent presentation of the US. Previous work indicates that, compared to Pavlovian conditioning, EC is less susceptible to extinction (e.g., Baeyens, Crombez, Van den Bergh, & Eelen, 1988; Díaz, Ruiz, & Baeyens, 2005; Dwyer, Jarrat, & Dick, 2007; Vansteenwegen, Francken, Vervliet, De Clercq, & Eelen, 2006; Gawronski, Gast, & De Houwer, 2015). We explore if changes in liking also decrease in magnitude once the intersection between regularities is put into extinction. Note that extinction in learning via intersecting regularities requires that the intersection itself be extinguished. This could be achieved in several ways.

**Extinction via the removal of stimuli**

**Study 1**

A first way to extinguish the aforementioned intersection between operant contingencies would be to no longer reinforce certain responses with certain outcomes. For instance, imagine that during Phase 1 participants first learn (Positive Source (S1) 🡪 R1 🡪 Neutral outcome (**O1)**; Neutral Target (T1) 🡪 R2 🡪 Neutral outcome (**O1**). Similarly, they learn that (Negative source (S2) 🡪 R3 🡪 Neutral outcome (**O2)**; Neutral target (T2) 🡪 R4 🡪 Neutral outcome (**O2**). We would expect O1 and T1 to be positively valenced and O2 and T2 to be negatively valenced after this phase.

Now imagine that in phase 2 we extinguish the intersection by no longer reinforcing responding in the presence of a Positive source (S1) with a Neutral outcome (O1), or a Negative source (S2) with a Neutral outcome (O2) (i.e., S1🡪R1🡪***Nothing***; T1🡪R2🡪**O1** and S2🡪R3🡪***Nothing***; T2🡪R4🡪**O2**). In the case we would expect liking for T1 and T2 to diminish in magnitude after Phase 2.

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| **ACQUISITION** | | | **EXINCTION** | | |
| **STIMULUS** | **RESPONSE** | **OUTCOME** | **STIMULUS** | **RESPONSE** | **OUTCOME** |
| Positive source (S1) | Press D (R1) | **Neutral Outcome (O1)** | Positive source (S1) | Press D (R1) | **/** |
| Neutral target (T1) | Press C (R2) | **Neutral Outcome (O1)** | Neutral target (T1) | Press C (R2) | **Neutral Outcome (O1)** |
| Negative source (S2) | Press J (R3) | **Neutral Outcome (O2)** | Negative source (S2) | Press J (R3) | **/** |
| Neutral target (T2) | Press N (R4) | **Neutral Outcome (O2)** | Neutral target (T2) | Press N (R4) | **Neutral Outcome (O2)** |