Learning to perceive: psychological and neural processes underlying placebo and nocebo effects on cutaneous sensations

Blythe, J.S.

Propositions

1. Placebo and nocebo effects demonstrate the important role that expectations play in shaping our conscious experience.

2. Sensations like pain and itch are the result of integration between peripheral, bottom up inputs and central, top-down processes like expectation, emotion, and memory.

3. While words alone are enough to alter our experience of pain and itch, their effect can be bolstered with firsthand experience or observational learning (this dissertation).

4. Itch is a more complex sensation than pain to experimentally manipulate with precision and consistency, which may explain why expectancy effects on itch are generally smaller than for pain (this dissertation).

5. Neural markers for nocebo effects on pain can be measured before the pain is felt (this dissertation).

6. D-cycloserine may not impact nocebo-augmented pain ratings or neural markers, but this does not exclude a moderating role for neuroplasticity in placebo and nocebo effects (this dissertation).

7. When we view placebo and nocebo effects through the broader lens of predictive coding, we can better understand the determinants of these effects and better apply them in settings outside the laboratory.

8. Expectations play a role in shaping the outcome of almost any medical and non-medical treatment, and we can improve clinical outcomes when we take these processes into account.

9. The power expectations have to shape our experience has been acknowledged in folklore and popular culture; science offers an empirical means of exploring this well-known yet not well understood facet of our minds.

10. Your thoughts influence how you experience reality- use them wisely.

Propositions related to this dissertation: 3,4,5,6

Propositions related to the field of research: 1,2,7,8

Propositions related to societal subjects of the candidate's choice: 9,10