**Pig Touchscreen Initial Response Shaping**

See further tips and notes in Ao et al., 2022

**Purpose:**

This serves as the base for all further tasks. The goal is to shape a robust nose poke response to the touchscreen that can then be used to assess motor function, memory, decision-making, and more. The poke starts at any position in the screen but then gets smaller for more targeted responses.

The program is designed with four stages. You can start an animal at any stage in a session if they have mastered a given stage(s). Incorrect responses are not punished until the final stage in this protocol. Multiple sessions can be given in a day, but we recommend a break between sessions to maximize motivation and learning.

**Stage 0** is an autoshaping protocol. The goal here is for the pig to learn that the screen will light up and then a pellet will be delivered. However, the pig can respond at any time to get a pellet.

**Stage 1** is a fixed ratio schedule with the entire screen lit and available as a response. It also inserts an intertrial interval so the light can begin to gain *discriminative control* over the behavior.

**Stage 2** is the same as stage 1 but presents a smaller bar across the screen to facilitate attention to the lit up region.

**Stage 3** is a the same as stage 2, but now a smaller box that moves around the screen is required for the response.

**Stage 4** is optional and starts shrinking the box. Incorrect responses outside the box are punished with a timeout. This can be useful if you need accurate presses in future tests. It is also most useful with an FR-3 or higher (so they can correct their responses and “dial in” the response).

**Variables**

Multiple variables can be set in this procedure. Most relevant are:

* **Responses in a given stage** – this is the criteria before the program automatically moves on. Increase if more is needed. Set to small number to give a “refresher” at the start of a new session
* **Limited Hold** – time limit for response before omission
* **FR Req** – FR setting. Based on our experiences, an FR-3 should be used for most pig tasks