Instructions

Summary

The task you are about to complete takes approximately 45 minutes (~20 minutes if this is the first or last visit). Your goal is to **learn relationships between different images and outcomes**. On each trial you will be asked to indicate your subjective probability that the image you see will be followed by pain or that it will not. 100% means that pain will certainly follow, 0% means that there will be no pain after this image. Following your response, electrical stimulation will follow or it will be omitted. This gives you the opportunity to learn the probability that a certain image is followed by pain or not. The probability of any image being followed by pain **can be stable or it can change**, you therefore need to keep paying attention to the recent history of outcomes and indicate your subjective probability adequately. Please try to be as accurate as possible.

Before we start with the task we will conduct a calibration of the stimulator. This will ensure that during the task we will only use a level that you are happy with. The **same strength** of the stimulation will be used throughout the task. At random points in the task the computer will perform a re-calibration. This is done to ensure that the stimulations don't feel stronger or weaker to you than at the beginning. Note that calibrations are introduced into the task randomly and don't restart your learning, i.e. if a particular image was often followed by pain you should continue the task assuming that is still the case.

Here is a bit more detail about the calibration and the task.

Calibration

The goal of the calibration is to identify your personal 8/10 pain level that will be used throughout the task. It may be difficult to put a number to pain. For the purpose of this experiment, 8/10 pain level is defined as a painful sensation that, however, you are still willing to experience on 50% of the trials which equates to approximately 80 times in session 1 and 3 and approximately 150 times in session 2. The stimuli should be painful but just enough for you to be willing to receive them the above mentioned amounts of time. Importantly, if the stimulations become too strong or too weak you will have the opportunity to adjust their strength during a re-calibration. If they become too strong at any point please do tell the experimenter.

The calibration itself involves receiving a series of stimuli and rating them on a scale from 1 to 10 where 0 is 'not painful at all' and 10 is 'very painful'. The stimuli vary in intensity, so you should try to be as accurate as possible. Once a stable 8/10 level is found we will use a validation procedure to inform the computer of your ratings.At this stage, nothing will change for you. You will keep rating the sensations as before, the only difference is that you will see the experimenter inputting the numbers into a computer.

Recalibration will only involve the second part of the calibration procedure.

Task description

The task will involve going through a few hundred trials. In the beginning of each trial you will be presented with an image and asked to indicate how likely it is to be followed by pain on this particular trial. There will be several images, not just one, in the entire task, however, only one on a particular trial. In the beginning of the task you will of course have no information about the relationship of the

images and whether they are followed by pain or not, however, as you go through more and more trials you should be able to identify the current likelihood of a particular shape being followed by pain on a given trial. The probability of pain for a particular shape might also change, so you need to keep paying attention all through the task. Try to be as fast and as accurate as possible.
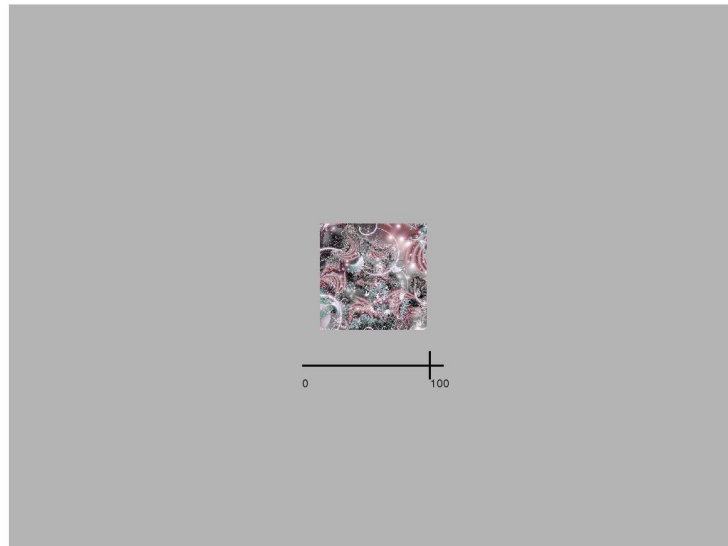
Occasionally, you will be presented with two shapes and asked 'Which shape would you prefer?'. In those instances, please indicate the shape that you would prefer to occur. This should be the shape that you believe has a lower probability in resulting in pain.

IF YOU WANTED TO PREVENT PAIN WHICH SHAPE WOULD YOU CHOSE?
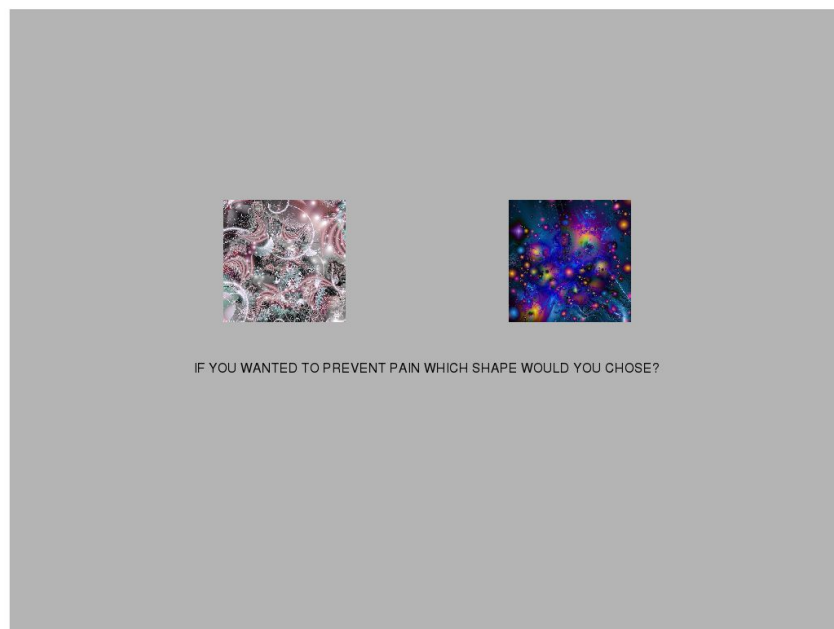
Importantly, you should treat all of the trials as a single continuous run. The occasional events such as breaks, calibrations or preference questions have no impact on the task and are inserted randomly.