Social facilitation: arousal and performance

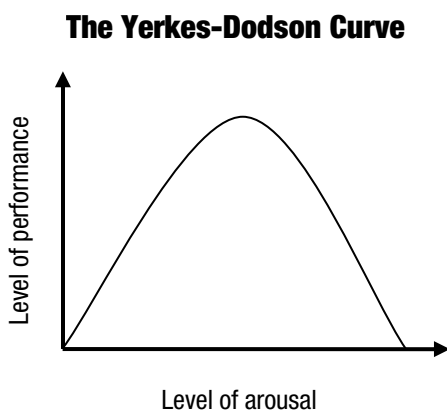| You are learning how to…	In the context of…
• Apply psychological concepts to real life behaviour • Use psychological models to predict and analyse examples of behaviour.	o Social facilitation o The relationship between arousal and performance o Dominant and non-dominant responses

Why does an audience affect task performance?

We have seen that the presence of co-actors or an audience tends to make performance better on some types of task. Zajonc et al (1969) demonstrated this with cockroaches escaping a bright light and Triplett (1898) and Michaels et al (1982) showed it in humans winding a fishing reel and playing pool respectively.

According to Zajonc (1965), it happens because the presence of others causes **physiological arousal**. Arousal is a term used by psychologists to indicate how energized, alert or ready for action a person is. Someone in a state of low or zero arousal is sleepy or unconscious.

Arousal and task performance: the Yerkes-Dodson curve

There is a relationship between someone's level of arousal and their ability to perform on a task. Quite obviously, a person who is unconscious is unable to perform at all, and we might expect that

The Yerkes-Dodson Curve

as a person's level of arousal increases, so does their ability to perform. However, a number of psychologists, starting with Yerkes & Dodson (1908), have observed that performance does not go on improving as arousal continues to increase. The relationship is not linear. The **Yerkes-Dodson curve** suggests that there is an **optimal level** of arousal for performing a task. That is, there is a level of arousal where performance will be best. If arousal is lower than the optimum then performance will be poorer but, very importantly, performance will also deteriorate if arousal is *higher* than the optimal level.

Level of performance

Level of arousal

Use the ideas of social facilitation, arousal and the Yerkes-Dodson curve to analyse the following situations. Write a short analysis about each where you use the psychological concepts to explain the person or people's behaviour. Make sure you use technical vocabulary.

Many teachers agree that students work best in small groups of three or four but most also notice that when students work in groups of five or more their work is not so good.
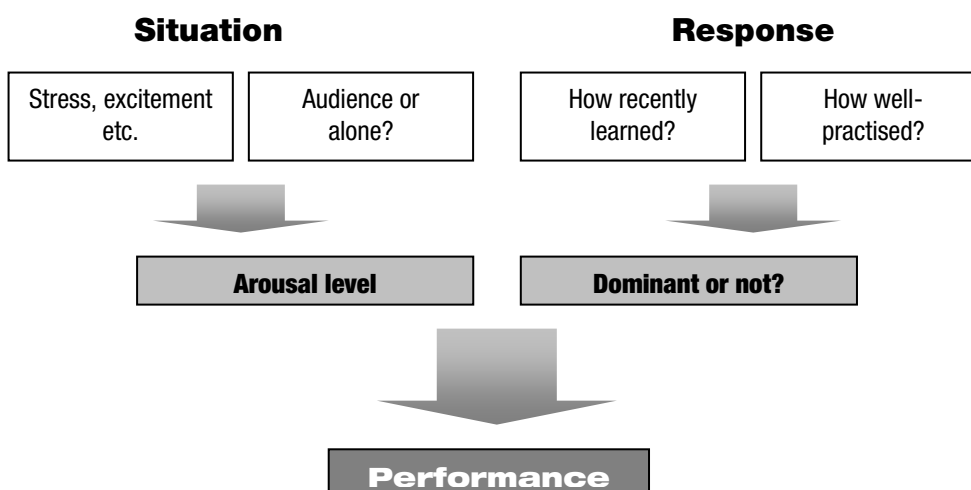
Harjot and Sally both compete at athletics for their school, throwing the javelin. In one competition, Harjot threw a personal best and won whilst Sally kept throwing fouls and did not get placed. Talking afterwards, Harjot said that she 'got a buzz' out of competing in front of the crowd. Sally said that she had seen her boyfriend talking to his ex just before the competition started.

Dominant and non-dominant responses

The Yerkes-Dodson curve explains some but not all of the findings on social facilitation. It does not obviously explain why task difficulty and the performer's level of expertise seem to affect whether an audience makes performance better or worse. Zajonc et al (1969) found that an audience made a difficult task harder for their cockroaches and Michaels et al (1982), in their study of pool players, found that an audience increased the accuracy of good players (from 71% to 80% on target) but had the opposite effect on poor players (accuracy fell from 36% to 25%). Why might this be? According to Zajonc (1965) these things happen because arousal does not affect all responses in the same way ('response' is how psychologists often refer to specific actions people or animals do). When a response has been really well learned, so that the person does it well without even needing to think about it, arousal makes performance better. These are called **dominant responses**. However, if a response is not well learned (e.g. because it has been learned recently or not practiced) arousal makes performance worse. These are called **non-dominant responses**.

> **Identify examples of a dominant and a non-dominant response from your own behaviour.**
>
> **Use the ideas of arousal and dominant/non dominant responses to write a short explanation of the findings of Zajonc et al (1969) and Michaels et al (1982). Remember to use technical terms in your explanation.**

Situation

Stress, excitement etc.	Audience or alone?

↓

Arousal level

Response

How recently learned?	How well-practised?

↓

Dominant or not?

↓

Performance

Zajonc's theory is that increased arousal makes it easier to do simple things but harder to do complex things. Dominant responses are simple because they have been well-learned and no longer require much thought to carry out. Non-dominant responses require much more focus to carry out and too much arousal interferes with this.

> **From all of this we can build up a picture (or model) of the things that determine how well a person performs on any given task. Use this model to answer the following questions. Explain your answers fully, using technical terms where possible.**
>
> Max has been practising a new trick on his skateboard, on his own. As he successfully completes the trick, a friend who he hadn't noticed approaching, says 'hey – that's really good – do it again!' Max tries, but this time falls off and hurts himself. Why can Max no longer do the trick?
>
> Advising a novice musician on how to perform well in concert, an experienced player says, 'it's not enough to practice until you can play it – you must practice until you can play it in your sleep!' Why would a psychologist agree?
>
> The Elbonian Air Force recently modified their warplanes so that the positions of the landing gear and bomb release controls were swapped. The pilots were extensively trained but occasionally they still accidentally bomb their own airstrips. Why is this most likely to happen in bad weather?