

Week One:

Describe the phenomenon of Replicagate: Replicagate describes the state of social psychology in that studies are not being properly peer reviewed or carried out in a scientific way. It involves issues relating to manipulation of power in experiments as well as issues relating to cheating and other questionable research practices.

What did Jacob Cohen's D do and how did he investigate this? Jacob Cohen created the first power analysis and his 'cohens D' was the first way of creating this analysis. It was used to estimate the power of finding a significant effect in primarily journals such as those of Abnormal and Social psychology. He took one volume in this journal and tested it, to see how much power the researchers had and to try and find evidence for their alternative hypotheses'

His research showed that the power that the researchers had in the volumes had very lower power in detecting small effects (at only 18 per cent), modest power for medium effects (48 per cent) and good power to find large effects (83 per cent). This is controversial because the true effect size of social psychology is only small, with very low power.

His conclusion from this study stated that despite only having modest powers, researchers were still reporting significant results. They were also not likely to submit non-significant results. He also suggested researchers and editors working together in a non-scientific way.

Describe two studies that demonstrate Questionable Research Practices:

The first of these was done by Stapel, in 2011. He aimed to investigate the 'secret life of emotions'. His method involved priming participants with photos to induce fear and disgust, and then measured their immediate reactions. Afterwards, participants had to complete a word fragment task with either emotional or non-emotional words (disgust, fear or control). His results showed that participants primed with disgust or fear completed more words relating to these emotions in the word fragment task. They were also less likely to participate in a follow up task that may be related to their prime (i.e. tasting strange food when primed with disgust). **This showed QRP as the study collected no solid data; it was fake data and he was expelled from his job and degree.**

A second such study is Bem, 2011. He published a paper detailing nine experiments claiming to have evidence for pre-cognition. His method involved getting participants to guess where an erotic picture would come up on a screen (computer randomised where it would go). He found that across all 100 sessions, participants accurately identified the position of the pictures by more than chance. It was a small effect, but it was significant. Eight out of nine studies were significant. **This showed QRP as Bayesian stats tested the statistics of the study and found no statistical evidence of pre-cognition.** Also suggested there were faults in how the paper was peer reviewed.

What is questionable research practice (false positive psychology)?

Questionable research practice involves excluding data which is inconsistent with a theoretical hypothesis. Examples of questionable research practices include: selective reporting of dependent variables (such as changing the dependent variables after the study is completed), stopping data collection at whim, failure to disclose experimental conditions, selective reporting of studies and methods (to paint an overly

positive/robust figure), rounding of a p-value to a significant value, changing the hypotheses after the results have been found, using outlier strategies and editing the type 1 error rate.

Ways in which a researcher can play with their degrees of freedom is by choosing their dependent variables, editing sample sizes, using covariates and reporting selective conditions.

What is the replication crisis and how can it be addressed? What problems did the wonder woman study run into?

The replication crisis refers to a methodological crisis in social psychology where results of many scientific studies are difficult or impossible to replicate. Registered replication reports aim to investigate this variation in replicability by calling on research groups to independently replicate an experiment. Results of RRR's show that replications often found different effects to those reported, with the original findings being too optimistic. They also found only about one third of big studies were actually replicable or replicated.

We can address the replication crisis in five main ways: pre-registering replications: this involves the principles of open science, as researchers state what their analyses are and subsequently reducing their degrees of freedom.

It involves the six principles of open science: data, source, access, methodology, peer-review and educational resources. It involves a need to sample non-westerners, as 96 per cent of studies use data from westerners. It involves a focus on boundary conditions as well as addressing systemic issues such as the researcher's incentive to publish.

The 'wonder woman study' aimed to investigate whether people felt more powerful and confident when using this stance. They had a sample size of 42, with more than 24 replications. Their original results found that the stance increase levels of testosterone and cortisol, with increased alertness and effectiveness.

The issues: when a much bigger sample was used, there was no evidence found for hormones and risk-taking, using a sample of 200. An even bigger sample found reversed effects. There was evidence of p-hacking: their sample size was small, their primary dependent variable changed from risk-taking to others, they utilised selective reporting, used outlier strategies and p-hacking.

Week Two:

Define violence and aggression and talk about its subtypes:

The main difference between violence and aggression is physicality. Violence is aggression that is physical. Aggression is defined as behaviour directed towards a goal of harming someone else who is motivated to avoid this. There are five subtypes of aggression and these include direct forms of physical and verbal aggression, as well as indirect aggression (such as gossiping etc.) that can be just as harmful as physical aggression. There is reactive aggression which is a defensive response to being provoked (often accompanied with anger) and there is proactive aggression, which is goal-directed, intentional and unprovoked.

What is the social cognitive theory of aggression and the social information-processing model of aggression?

The social cognitive theory of aggression is dubbed by Bandura and involves aggression being repeated by learned behaviour, through vicarious or observational learning. The primary study done with this model was the Bobo doll study, which showed kids imitate this aggressive behaviour. It has an equal emphasis on the social environment and cognition, and has inspired much research on aggression in video games.

The social information-processing model has a stronger emphasis on the cognitive. It states that while we do model behaviour, we form scripts of aggression and violence and act on these scripts. We develop these scripts through being forced to observe aggressive behaviours.

What are the main factors of the General Aggression Model and what is the empirical evidence supporting it?

The general aggression model is a social-cognitive model with a biological component. It is an integrative model that combines our inherent dispositions (genetic, biological and family experiences), the development and maintenance of our aggression due to knowledge structures (attitudes, beliefs) as well as our exposure to the environment (which act as triggers).

It is a multi-determined model. We aggress due to our biological and environmental modifiers and personality factors, which will interact with our situation.

We have internal states that we use to appraise a situation, to then decide how we will act (either impulsively or thoughtfully). The consequences of such an act will loop into the feedback loop and influence how we might act in the future.

It is the only model that incorporates biology, personality, social and cognitive factors in short and long-term reactions through immediate reactions and the feedback loop. There are three critical stages: the person and situational factors will influence our internal states (arousal, affect and cognition), which will influence our act (impulsive or thoughtful) and thus end with the feedback loop.

Denson (2011) showed how we can break the feedback loop and encourage thoughtful thinking through self-regulation. Had two groups: one received self-regulation training over 2 weeks and a control group did not. The design had a pre-test measure of aggression, with random allocation. In the baseline measure, they provoked individuals and gave them the chance to retaliate via a white noise blast.

The self regulation group were told to use their non-dominant hand for 2 weeks, between 8am to 6pm every day, to break a natural impulse and break the

automatic pathway. They were encouraged to be conscious and effortful and had to complete an online, time monitored diary every second day to how well they used the hand (1-10). The control condition only had to respond to text messages asking simple math related questions. After the 2 weeks, the groups both received insulting feedback on their experimental performance and given the chance to retaliate via white noise blast. This successfully increased anger and blood pressure.

Aggression was measured by the mean duration of the blast, but also the intensity of the blast. Results showed reduced aggression in individuals with high trait aggressiveness and less anger than those in the control group. It successfully shows the incorporation of cognitive appraisal to address biological factors.

Greitmeyer et al. (2012) aimed to investigate the effect of prosocial video games on reducing aggression. The aim was to break the aggression feedback loop with prosocial factors. Baseline measure of aggression was measured with reaction to negative feedback. There were three conditions: a prosocial game (with fire-fighters), a neutral game (pinball) and a violent game (combat). All games were played for 15 minutes and completed an arousal and mood scale. After this, they had a chance to retaliate to the negative feedback via a white noise blast).

Results found that participants who had played the prosocial video game behaved less aggressively than both other conditions, with mood and arousal controlled for. Shows the effect of immediate reactions in breaking the feedback loop. Also investigated the effect of cognitive appraisal on addressing aggressive scripts.