Does Helping Hurt

Intro and Background

- does aim assistance in fps game adhere to the *guidance theory* which states that players become reliant on assistance if it is applied throughout the learning phase
- aim assistance is extremely popular as it is known to have a positive impact on all players
    - aim assistance applied to low skill players will help them overcome challenge and achieve flow
    - high skill players playing against aim assisted low skill players enjoy the experience more due to increased challenge
- skill development was divided into three phases (Fitts and Posner's three stage model)
    1. cognitive
    2. associative
    3. autonomous
- learning is most effective in *flow state*
- feedback and assistance can be divided into
    - **Knowledge of Performance** (KP)
      provides feedback of the quality or pattern of play (i.e. trigger pressed too early, aim too high)
    - **Knowledge of Results** (KR)
      indicate level of success of an action (i.e. hit markers, enemy death or points)

Study

- 18 participants
    - novice gamers only
- custom fps game
    - unreal engine + NFringe
- 5 day experiment
- beginning and end of week there was a *shooting gallery* game to asses aiming skills of the players. This was used as a baseline for learning and skill development.
- Throughout the week participants played the game which consisted of a walkthrough a level with simple bots, unlimited ammo
- Used bullet magnetism for aiming assistance
- variables
    - for the shooting gallery the following variables were used to asses performance
        - score, hit ration and headshots
    - walkthrough variables
        - hit ratio, headshots, deaths, time
    - also measured
        - competence and autonomy (PENS)
        - interest-enjoyment and pressure (IMI)
        - suspense (Moulard's Suspense scale)
        - Attribution (Player Attribution scale)

Results

- aim assist lead to greater increase in performance
- aim assist throughout skill development phases did not have a significant difference on skill development when removing the assistance
- perceived competence was higher with assistance present