What's The Time? Examining whether technological advances are affecting our temporal judgments.

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INTRODUCTION

Theories of internal clock agree that variations in individual **external stimuli may affect our internal representation of time**, and this has been shown to hold in lab settings. **However,** our individual differences, and varying life experiences, and the possible implications for these on temporal experience have not received this same level of attention.

Anthropologists/ Ethnographers and Social Psychologists have examined the **cultural implications** on the representation of time within society (for example Flaherty *et al,* 2005), yet the possible **effects of society on any form of internal clock system** remain to be examined in full within the cognitive realm.

Within western society, time has become a commodity:

- We exchange it for money
- We waste it
- We save it

However,

- We appear to feel under more **time pressure** today than previous generations (Gleick, 1999).

Blatchley *et al's Computer use and the Perception of Time* (2007), provides a brief and limited examination of timing accuracy and use of computers, however it fails to address the paradoxes and issues involved in temporal judgements.

Motivation and Aim of the current research:

- To add to the body of existing knowledge by performing an in depth investigation into whether an individual's **use of "everyday technologies"** may be having a **stimulating effect on the internal clock.**
- To address whether advances in technology may be added to, rather than alleviating feeling of "time pressure".
- To highlight the practical applications of internal clock theories.

Two separate experiments were conducted:

- Technology Use and Duration Estimation
- Technology Use and Interval Production

Level of "everyday technology" use was measured, through use of the *Everyday Technology Use Questionnaire*, which was developed by the researcher.

METHOD

Duration Estimation Task:

- 56 participants (m= 29.89yrs)
- **IV= Technology Use**, two levels (high and low) Measured by ETUQ
- **DV= Estimation of duration** of given stimuli.
- **Stimuli**- Tones of varied duration from 500ms to 3000ms

Interval Production Task

- 60 participants (m=30.35 yrs)
- **IV= Technology use**, two levels as above
- **DV= Actual Interval Produced**

RESULTS

Duration Estimation Task

- 73.2% felt considerably or entirely dependent on technology
- 83% felt life moving increasingly faster.
- 50.9% of participants admitted to never having enough time in their daily lives.
- MANOVA found statistically significant difference in estimations made by each group. F (10, 45) =2.4, p= .022; Wilks' Lambda= .65

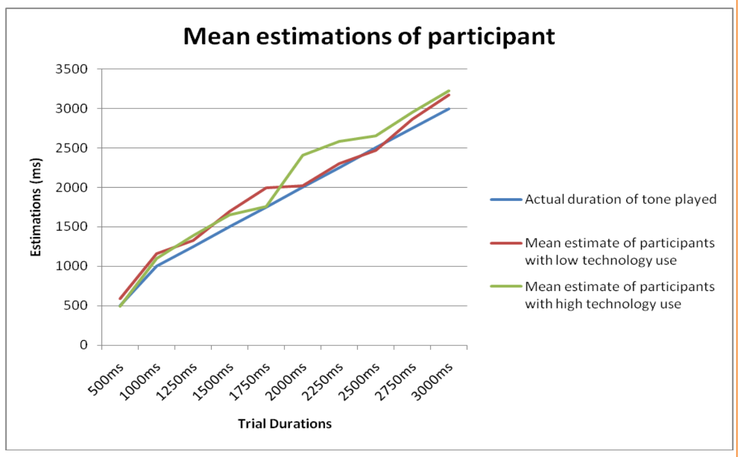

Fig. 1: **Shows the mean estimations of participants split in to two groups (high and low technology usage).**

Interval Production Task

- MANOVA found a significant difference in productions made by each group. F(11,48)= 2.48, p= .015, Wilks'Lambda = .98

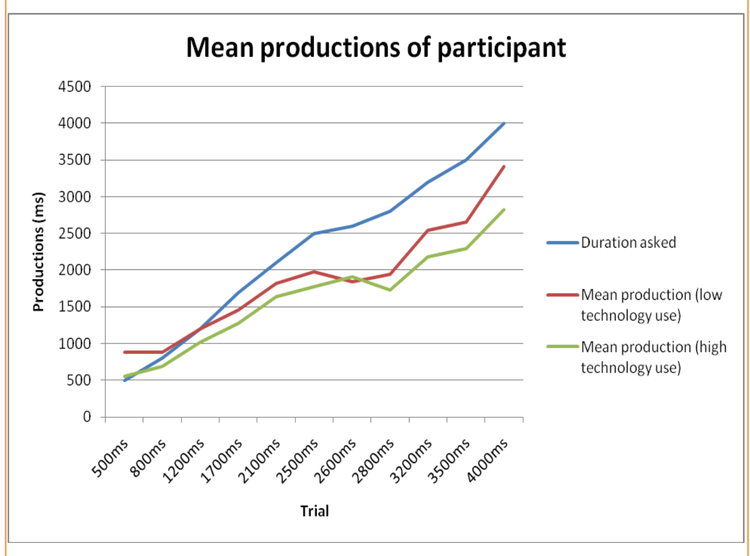

Fig. 2: **Shows the mean productions of participants for each trial, split into two groups (high use of technology and low use of technology).**

CONCLUSIONS

The benefits of advances in technology are often discussed, however the **adverse effects of a techno-centric society are rarely mentioned**, especially with regard to how they affect something so important as how we experience time.

The current research indicates that use of technology may elicit **changes consistent with an increase in the speed of our internal clock**. This could cause a dissonance between real time and subjective time in our daily lives. It also highlights that our **individual life experience can have an affect on the workings of an internal clock**.

SO?

- **Levine (1999)** found Ireland to have the 2nd fastest pace of life out of 31 countries studied
- **Roxburgh (2004)** cites time pressure as a leading cause of heart disease.

The practical implications of varying clock speed are vast.

ONGOING RESEARCH

Currently conducting further studies

- One investigating the relationship between the individuals' level of the trait **absorption and technology use**
- A number looking at the **possible mechanisms** within a techno-centric society which may be responsible for the apparent difference in individuals temporal experience.

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