Psychology (of games, habits)

Thursday, October 18, 2018 1:20 PM

- **Polygon-based designs**
    - We realize it is not realism, we are getting a glimpse into something that is no
we can call it a type of 'escapism'
    - Emerged with the popularity of VR

Example of polygon based landscape

The Brain

- Basil ganglia seems to be responsible for committing routines to habits - reducing th
load
- The brain's outer layers are considered more 'new' whereas the inner layers are old
behaviours/actions (breathing, walking, etc)
- When something becomes a habit, there is less activity in the outer layers of the bra
mental load is lessened
- You can still have the ability to form new habits without remembering (or the ability
remember anything at all - Alzheimer's)
- The cues need to be present, then the basil ganglia dictates what to do (it takes ove
habit takes over)

Habits

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Habits

- Learn to "tighten the habit loop"
- Small shifts in habit cues can throw off the loop - restaurant you love closes, no you
  for the next nearest one, you eat at home instead

Elderly and Gamification

3 main focuses :

- Creating an appropriate amount of competition = engagement
- A well balanced reward system -> they will notice if they are getting rewarded too e
  like a game for children with too much positive reinforcement)
- A good storyline (reasons to perform these actions)

https://link.springer.com/content/pdf/10.1007%2F978-3-642-15399-0_4.pdf

- Gesture and speech game
- We were discussing how adding speech can create a layer of more detail to the gam
  adding anything to the exercise/physical benefits but adding to the **emotional** aspe
  game, the motive and storyline.

Books:

How to Create a Mind - Ray Kurzwell

The Power of Habits - Charles Duhigg

Beyond Self-Tracking and Reminders: Designing Smartp Apps That Support Habit Formation

https://dl.acm.org/citation.cfm?id=2702230

- relying on reminders supported repetition but hindered habit development, whil
  event-based cues led to increased automaticity; positive reinforcement was inef

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event-based cues led to increased automaticity, "positive reinforcement" was inef

- The functionality review revealed that existing apps focus on self-tracking and reminders, and c
event-based cues
- contextual cues and implementation intentions.
- A habit is defined as a consistent repetition of a behavior in the presence of stable contextual cu
increases the automaticity of that behavior
- Current situation (2015): At present, behavior change apps often do not support habit formation
focus on tracking, self-monitoring and social support --> more on tracking rather than habit for
(support for trigger events and implementation intentions)
- The number of repetitions required to reach the asymptote depends on the complexity of the tas
vary from 18 days for easy tasks (e.g. drinking more water) to an estimated 254 days for more c
(e.g. going to the gym) . However, repetition alone is not enough to form a habit.
- Cues and trigger events support the habit formation process, as they start to drive the behavior
medication after breakfast). Event-based tasks are easier to remember than time-based tasks.
- Implementation intentions When situation X arises, I will perform response Y" [12], e.g. "wher
eating dinner, I will drink a glass of water". They help to connect the new behavior with an exis
and turn it into an event-based task.
- connect the new behavior with an existing routine and turn it into an event-based task. When th
between the task and its cues is explicitly stated, each repetition reinforces that association, whi
more efficient action initiation in the future and increases the automaticity of the behavior
- The trigger routine needs to be relevant, meaningful and reliable
- External memory aids (reminders) --> the effectiveness and salience decrease over time. It wor
habits that the automaticity develop faster than the decay of effectiveness of the remainder
- Positive reinforcement --> small success increase the feeling of satisfaction and can strengthen
- Therefore, to successfully form a habit, people need to start identifying the execution of the tasl
rewarding nature
- behavior change apps often do not support habit formation
- One approach: They argued that apps should offer routine creation (in the form of implementat
to help fit the behavior into a daily routine), back-up notifications (in case the routine changes)
completion checks (to check whether the task has already been completed).
- Study 1, conclusion: Results show that while event-based cues supported the development of au
might develop too slowly to make this approach effective on its own. On the other hand, time-b
(reminders) kept people engaged and helped them repeat the behavior. However, they could hin
development of automaticity as people learn to rely on reminders instead of trying to remember
themselves. In addition, positive reinforcement messages appear to be ineffective. The process
formation is complex and the results suggest that people could benefit from more support. Smar
with their ubiquity, personal nature and capabilities, have the potential to help.
- *Support trigger events.* Allow users to form implementation intentions and explicitly ask them t
trigger events, e.g. "I will do X after eating breakfast" (see [29] for more information on how th
done). Monitor their behavior by asking later if the task was completed. If users keep forgetting
selecting a different trigger event.
- *Use reminders to reinforce implementation intentions*. Remind users of their implementation in
advance by sending notifications *before* their selected trigger actions, e.g. "Please remember to
brushing your teeth" or "Don't forget to do Z before going to sleep". This could help users form
between the task and its trigger, and would encourage them to remember on their own. To ensu

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become reliant on notifications, they should phase out with time.

- *Avoid features that teach users to rely on technology.* Re- minders and self-tracking teach users tech- nological solution and can interfere with the process of de- veloping associations between cues and the task. They should not be used in habit formation apps as they hinder the process o formation.
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