UNUSUAL COLLABORATIONS

WEARABLES TECHNOLOGY and COMPLEXITY

CENTRE FOR UNUSUAL COLLABORATIONS
YOU CAN PREDICT THE OUTCOME
SIMPLE
COMPLICATED
COMPLEX
NO ONE SIZE FITS ALL
WHAT WORKS FOR ONE CHILD, DOESN'T WORK FOR THE OTHER
NONLINEAR LEARNING
MACRO LEVEL
EMERGE
MICRO LEVEL
permissive structure
spatial scale
Emergent Dynamics
time scale
10:04
66 SPM
HOW DO YOU SEE COMPLEXITY FROM YOUR PERSPECTIVE?
COMPLEXITY
Heleen Pennings
IT TAKES TIME TO CONVINCE OTHER PEOPLE A NEW METHODOLOGIES
WHAT WE WANT:
less:
• Research questions in levels, quantity,...
• Generalizations of results across a large number of participants
• Linearity and stability over time between individuals
• ...
• ...
More:
• Research questions about coherence, patterns, stability, self-organizations
• Variability of beliefs and behaviors between individuals
• Behaviors vary within persons and fluctuate on different time-scales
• Within person differences are embraced
IT'S IMPORTANT TO LOOK AT THE RIGHT TIME-SCALE
year to year, second to second?
To make interventions more participatory
think about the way the intervention is delivered
TEXT
PICTURE
THINKING ABOUT YOUR RESEARCH FROM A COMPLEXITY LENS
PHENOMENON
THEORIES
CDS CONSIDERATIONS
INFLUENCING FACTORS + LEVELS
KEY FINDINGS
METHOD
RQs
WHAT CAN WE ACTUALLY PREDICT?
HOW DO WE SUPPORT THAT PEOPLE ACTUALLY CHANGE THEIR BEHAVIOUR?
PREDICTION
PREVENTION
PERSONALISATION
HOW DO WE PROVIDE ADVISE TAILORED TO THE PERSON?
WEARABLES!
WELCOME EVERYBODY!
CHOOSE YOUR OWN ADVENTURE TODAY!
weekly personal reports
EFFECTIVENESS STUDY POLICE
Personal report week 4
6:15
there was hardly differences between wearable and wearable-i condition
We need to personalise algorithms
CONCLUSIONS
Currently wearables measure a fraction of what is needed
Not every user is a data scientist
typical feedback works best for users who are already motivated & involved
It's also important to track mental health not just physical heath
PROTOTYPE HEALTH PLATFORM DEFENSE
THE AURA RING
MENTAL HEALTH
Wim Kamphuis
SLEEP
PHYSICAL
HEALTH
DEVELOPMENT OF ALGORITHMS
WEARABLES
WHY WEARABLES
PARTICIPATION
HOW DO WE MAKE SURE THAT IT IS USEFUL FOR EVERYONE?
FIT FOR LIFE!
TU/e EINDHOVEN UNIVERSITY OF TECHNOLOGY
WAGENINGEN UNIVERSITY & RESEARCH
Utrecht University
UMC Utrecht
motivation
quality
compatibility
population / user age
openness to the technology
stigma
degree of gamification
Variable List
€100
price
addiction to tracking health indicator
physical capability
Battery life
..Euhh let me check..
Good morning, did you sleep well honey?
I HEAR THAT A LOT OF PEOPLE STOP USING WEARABLES BECAUSE IT'S ADDICTIVE
HOW AND WHY DO INDIVIDUALS ADOPT AND CONTINUE TO USE WEARABLE TECHNOLOGIES
such as fitness trackers, smartwatches and health monitors
facilitator
modeller
WHERE IS THE TRUST NOW?
GROUP MODEL BUILDING
SKILLS AND LITERACY
Number of individuals who adopt
Percentage of individuals who stopped using
Number of individuals who use
WATER-RESISTANT?
TECHNO STRESS
THANKS FOR COMING! THIS WAS NEITHER AWKWARD OR BORING :)
FEEDBACK LOOPS
SECOND ORDER:
• HOUSEHOLD
• MOTIVATION
• BEHAVIOR
• TECHNOLOGY ACCEPTANCE
WHAT KIND OF FACTORS COULD INFLUENCE ADOPTION AND SUSTAINED WEARABLE USE FOR HEALTH MONITORING?
DO YOU HAVE ADDITIONAL INFLUENCES?
THIRD ORDER:
SOCIETAL STANDARDS VALUES, BELIEFS
PROFICIENCY IN TECHNOLOGY
FIRST ORDER:
TECHNOLOGY FACTORS:
• EASY TO INTERPRET
• EASY TO USE
• DON'T HAVE TO CHARGE DAILY
2025
30th JUNE
UTRECHT SOCIAL IMPACT FACTORY
WANDVERSLAG.NL