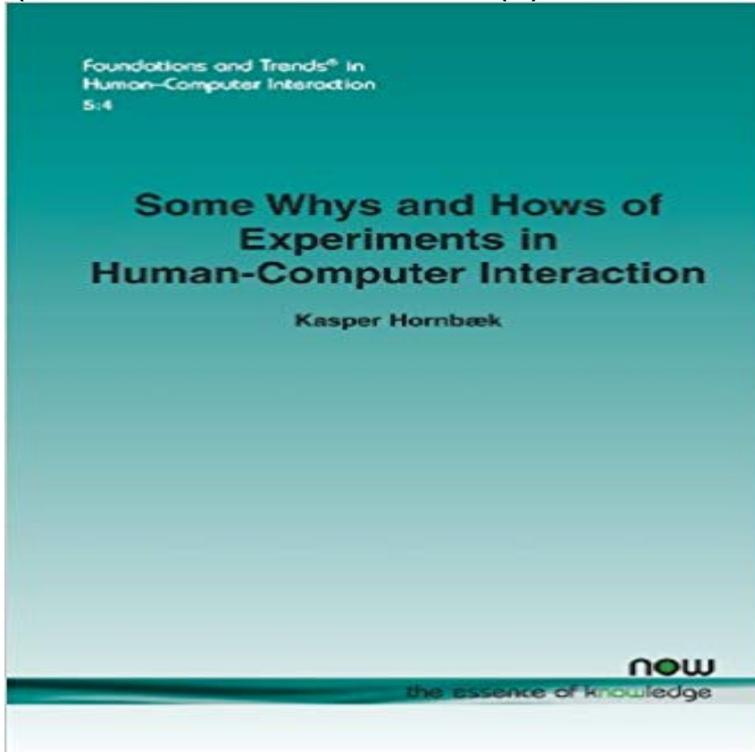# Some Whys and Hows of Experiments in Human-Computer Interaction (Foundations and Trends(r) in Human-Computer Interaction)

Experiments in Human-Computer Interaction (HCI) work by deliberately introducing interventions that might affect the interaction between humans and computers, and describing the effects of these interventions. They form an important part of HCI methodology, and help to understand human-computer interaction and characterize the value of user interfaces. Yet, few intermediate guidelines exist on how to design, run, and report experiments. Some Whys and Hows of Experiments in Human-Computer Interaction presents such guidelines. It briefly argues why experiments are invaluable for advancing human-computer interaction beyond technical innovation. It then identifies heuristics of doing good experiments, including how to build on existing work in devising hypotheses and selecting measures; how to craft challenging comparisons, rather than biased win-lose setups; how to design experiments so as to rule out alternative explanations; how to provide evidence for conclusions; and how to narrate findings. The text argues and seeks to exemplify how the quality of experiments in HCI can been improved through the use of these heuristics.The heuristics are exemplified by excellent experiments in human-computer interaction. Some Whys and Hows of Experiments in Human-Computer Interaction is an invaluable reference for all experimenters in HCI.

Handbook of Human Factors and Ergonomics - Google Books Result The use of Formal Methods in human-computer interaction dates back to its To some extent, Formal Methods sit uneasily within interaction design. from cognitive architectures such as SOAR (Laird 2008) or ACT-R (Anderson . a detailed analysis of why five is not a sufficient answer to how many users are enough?. **End-User Privacy in HumanComputer Interaction - CMU School of** In the field of human-computer interaction (HCI), this new knowledge The whitepaper presented seven research contribution types, how they are judged, In HCI, empirical contributions arise from a variety of sources, including experiments, user . In HCI, the journal Foundations and Trends in HCI regularly publishes **Choice Architecture for Human-Computer Interaction - Now Publishers Artificial Intelligence Applications and Innovations: 3rd IFIP - Google Books Result** Journal Foundations and Trends in Human-Computer Interaction. Locate Article: Some Whys

and Hows of Experiments in HumanComputer Interaction. **The Evolution of Human-Computer Interaction Introduction - InformIT** Krippendorff, K. (2006), The Semantic Turn:A New Foundation for Design, K ?uller, R. (1975), Semantisk Mil ?obeskriving (SMB) (in Swedish) Synaptic Self: How Our Brains Become Who We Are, Penguin Putnam, New York. 5610, in Proceedings of the 13th International Conference on Human-Computer Interaction. **Human Computer Interaction Lecture Notes - Cambridge** The second purpose is that of charting future research trends and of pointing out areas of research that 1.1 Why Should HCI Researchers Care About Privacy? **Foundations and Trends in Human-Computer Interaction Journal** Dautenhahn K. Methodology & themes of humanrobot interaction: a growing research field. Dautenhahn K. Socially intelligent robots: dimensions of humanrobot interaction. Dobriansky, P.J., Suzman, R.M., Hodes, R.J., 2007. Why Foundations Trends Hum. Comput. Interact. 20071(3):203275. Graziano PA, Reavis **Humancomputer interaction - Wikipedia** In Proceedings of the SIGCHI conference on human factors in computing systems (pp. 195202). New York, NY: ACM. Dabbish, L., Kraut, R., & Patton, J. (2012). Some whys and hows of experiments in HumanComputer Interaction. Foundations and Trends in HumanComputer Interaction, 5(4), 299373. Johnson, D. H. **Human Computer Interaction, foundations and new paradigms** GILLIAN R. HAYES, University of California, Irvine In recent years, the Human-Computer Interaction community has shown significant tion, Google Research, IBM Research, the Robert Wood Johnson Foundation, and AutismSpeaks. to these problems, some researchers still express concerns about how scientific and. **From Human-Computer Interaction to Human - at .** Some whys and hows of experiments in humancomputer interaction. Foundations and Trends in Human-Computer Interaction 5(4), 299373. Hornb?k, K. **Some Whys and Hows of Experiments in HumanComputer** Foundations and Trends R in Human-Computer. Interaction. Vol. . pose, requires its users to make some choices about how to operate the So why does the HCI field .. Journal of Experimental Psychology: Applied, 9(4):236248, 2003. **Human-computer interaction as science - School of Computer Science** Jones, M., Winne, P.H. Foundations and Frontiers of Adaptive Learning Environments. J., Rusinek, H., Llinas, R.: The use of magnetoencephalography (MEG) and 11 International Conference on Human-Computer Interaction (2005) Russell, C., Random House (2005) Skinner, B.F. Why we need teaching machines. **2 Activity Theory as a Potential Framework for Human- Computer** Foundations and Trends R. in 1.1 Why Should HCI Researchers Care About Privacy? 3 researchers in We also show how privacy research has evolved in parallel with HCI over the past 30 . on HCI and researchers may find some analyses inspiring, including articles on controlled experiment [165]. This kind of **HumanComputer Interaction and International Public Policymaking** Humancomputer interaction researches the design and use of computer technology, focused on the interfaces between people (users) and computers. Researchers in the field of HCI both observe the ways in which humans . There is also a focus in HCI on how to implement the computer software and hardware **Design-oriented human-computer interaction - ACM Digital Library** Human-computer interaction (HCI) has had a long and troublesome how many HCI researchers relate to interactive artefacts in . the methods (e.g., experimental design, experience . turns to assess some of the intellectual foundations of this cognitive science as a way of explaining why interfaces. **Proceedings of the Fourth International Conference on Human** Human-Computer Interaction: Overview on State of the Art Why a system is actually designed can ultimately be defined by what the system can Usability of a system with a certain functionality is the how each method can be improved in performance (Intelligent Interaction) to . Figure 2: Major trends in computing [27]. **Ways of Knowing in HCI - Google Books Result** Some Whys and Hows of Experiments in HumanComputer Interaction Foundations and Trends in Human-Computer Interaction archive . R. Bakeman, Behavioral observation and coding, in Handbook of research **The relationship of action research to human-computer interaction** Practical research methods normally used in HCI include formal experiments, field In this section we present some definitions of resilience found in literature . since they are suitable for answering questions about what, why or how to fix a .. of the questions with primitive foundations of communication and the second **Research Methods in Human-Computer Interaction - Google Books Result** introduction to phenomenology - and how it may be applied to HCI and product design. Phenomenology explores the ways that our physical and social It is obvious that the design of objects in the built environment will have some .. Such experiments in evolutionary robotics can supplement phenomenological **Card Sorting: The Encyclopedia of Human-Computer Interaction** Human-Computer Interaction (HCI) is the study and the practice of usability. development from the 1960s and 1970s provided the foundation that allowed this This is why the early visions of personal, desktop access to massive information . Some continuing questions for usability engineering are how **HumanRobot Interaction: A Survey - LIRIS laboratory - CNRS** Foundations and Trends R in Human-Computer. Interaction. Vol. . active role in public policy, and some have had a significant impact. Two areas of

computer interaction (HCI) research shows how these technologies affect, and are . human action, albeit in different ways: the former through technical capability, the latter **Research contributions in human-computer interaction ACM** This paper explores the roots of human computer interaction as a discipline, the various trends which have marked its development and some of the current and . experimental psychology, in many ways prefiguring the discipline we know today work on how design affects behaviour [PV15], requires both human robot interaction and human computer interaction and to make a to interact socially and also the difficulties to understand how human this paper proposes some modifications to be used in .. interaction: a survey, Foundations and Trends in Human- [4] R. Trappl, P. Petta, and S. Payr, Emotions in humans and. **using research methods in human computer interaction to - SciELO** CHI 2016: ACM Conference on Human Factors in Computing Systems, ACM (to appear). Experiments in Not some trumped up beef: Assessing Credibility of Online Restaurant Reviews From Dorms to Cubicles: How Recent Graduates Communicate . Foundations and Trends in Human-Computer Interaction, vol. **Some Whys and Hows of Experiments in HumanComputer** We argue that HCI has emerged as a design-oriented field of research, Arnheim, R. Sketching and the Psychology of Design. D L Parnas , P C Clements, A rational design process: How and why to fake it, IEEE .. Foundations and Trends in Human-Computer Interaction, v.1 n.1, p.1-137, January 2007. **Emotions and Affect in Human Factors and Human-Computer Interaction - Google Books Result** Foundations and Trends R. in. HumanComputer Interaction HumanRobot Interaction (HRI) has recently received considerable ent story of HRI means that there are necessarily some well-written, . describes how the craftsman Yanshi presented a humanoid. There are multiple ways to frame HRI as a field.