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# Creative Worthwhile Interaction Design

**Gilbert Cockton**

School of Design,  
Northumbria University,  
Newcastle upon Tyne,  
NE1 8ST, UK.  
[gilbert.cockton@northumbria.ac.uk](mailto:gilbert.cockton@northumbria.ac.uk)

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**Abstract**

Over the last two decades, creative, agile, lean and strategic design approaches have become increasingly prevalent in the development of interactive technologies, but tensions exist with longer established approaches such as human factors engineering and user-centered design. These tensions can be harnessed productively by first giving equal status in principle to creative, business and agile engineering practices, and then supporting this with flexible critical approaches and resources that can balance and integrate a range of multidisciplinary design practices.

**Author Keywords**

Creative Design; Agile development; Lean development; Interaction Design; Worth Focused Design Approaches; Balanced Integrated Generous (BIG) Design.

**ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

**Overview**

The themes of this course are: design work, creative practices, agility, lean, worth, experience, balance, integration, and generosity (worth-focused BIG design). The course combines and integrates high level perspectives on design (creative, engineering, strategic worth focus, usage and contexts foci). It reviews the

major results of design research since the 1970s to communicate the nature of creative design practices and the role of generosity in innovative design. It relates these practices to more formal engineering design approaches (including user-centred, agile and lean variants), with the goal of providing effective bases for balancing and integrating multi-disciplinary practices within interaction design. These bases are further strengthened by understandings of worth (balance of benefits over costs and risks of usage) and experience (meaning making through interaction). The resulting conceptual framework is made practical through novel and adapted approaches to design and evaluation.

### **Benefits**

As a result of attending this course, attendees will gain

- Knowledge about disciplinary differences between creative, strategic, technical and human perspectives on interactive software (and in particular, understand the roles of reflection in creative practices)
- Knowledge of strategies and approaches for applying and integrating diverse perspectives within a dynamic development process (in particular, creative and worth-focused perspectives in agile or lean settings)
- New perspectives on design work that support reflection on balance and integration, rather than following prescribed processes based on a single disciplinary position
- A broader and deeper understanding of design work and design management

### **Intended Audience**

This course is aimed at broad, open minded and curious practitioners, educators and researchers in creative design, software development and interactive technologies who want to understand novel creative and worth-focused approaches to Interaction Design, both in research and practice, as a basis for reviewing, extending and balancing their existing practices and introducing design process innovations.

### **Prerequisites**

There are no formal pre-requisites. Attendees should ideally have experience of several design/development projects from initiation to completion, mastery of an existing discipline (e.g., computing, creative design, engineering, marketing, innovation strategy) and awareness of others. Most important is a willingness to have existing positions and values challenged, to try out new approaches with attendees from diverse backgrounds, and to discuss your initial experiences with these new approaches.

### **Content**

Attendees will learn about disciplinary differences between creative, technical and human perspectives, as well as strategies for integrating diverse perspectives within a dynamic development process. The course will systematically introduce, integrate and exploit:

- Creative, agile, lean, engineering and human-centered design practices: origins, similarities and differences; results of 'research into design' studies; the role of design arenas in different design paradigms

- The concept of *worth* as a strategic focus for design purpose, its implications for design practice, and supporting approaches and resources
- Adding worth-foci to existing user-centred approaches such as personas, scenarios and empirical evaluation
- Means-ends chains and laddering as approaches to integrating technical, creative, experiential and strategic aspects of design
- Worth sketches and worth maps
- Collaborative creativity methods, using 6-3-5 Brainwriting as a practical hands-on example
- Individual creativity methods, using mind-mapping as a practical hands-on example

### Practical Work

- Individual identification of technical, creative, experiential and strategic aspects of design within a worth-focused interaction scenario (design arena identification)
- Group exercise building on scenario analysis to create a worth sketch for a web service (design arena integration)
- Collaborative brainwriting and mind mapping exercises as input to a follow on group exercise to extend the worth sketch from attendees' personal experiences and knowledge, plus new insights arising during exercises (design arena expansion and further integration)
- Group reflection and discussion on successes and difficulties during practical exercises on the course.
- Plenary discussion of alternative process structures to standard UCD and current agile/lean lifecycles

### Presenter Background

Gilbert Cockton is Professor of Design Theory in the School of Design at Northumbria University in Newcastle upon Tyne, UK, where he leads the university multidisciplinary IDEATE research theme on design ideation.

From 1997-2009, he was Research Chair in HCI at the University of Sunderland, where he was the recipient of a UK NESTA Fellowship on Value-Centred Design. Work during this fellowship moved his research from the design end of computing to the computing end of design, extending the variety in a career that has blended education, academic research, childcare, design, consultancy, work for and within business and public sectors, directing large regional economic development projects, and professional service.

A Fellow of the UK Royal Society for the Arts, he has published extensively since 1985, with 235 papers, chapters, books, articles and edited proceedings and 144 invited presentations in 22 countries, on usability, user-experience and accessibility, theoretical and empirical inputs to design and evaluation, the nature of design work, and notations and architectures for interactive software.

He was scientific co-ordinator for the 26 country European TwinTide network on inter-sector transferability of software design and evaluation approaches. He has secured funding for research and knowledge transfer projects and infrastructure with a value of over \$7M. He has contributed to the supervision or examination of 86 research students.

He is co-editor in chief of ACM Interactions magazine and has served in many roles within the international HCI community, including Vice-Chair of IFIP TC13 (2004-06), Chair of British HCI Group (2001-2004), Chair of ACM CHI 2003 and BCS HCI 2000 Conferences, and Secretary of IFIP WG2.7 on user interface engineering (1993-99). He is Editor Emeritus of Interacting with Computers, a member of the editorial board of the Journal of Usability Studies, and has advised national projects in Japan, Finland and Poland.

### Resources

Publications and further information can be found at

- [northumbria.academia.edu/GilbertCockton](http://northumbria.academia.edu/GilbertCockton)
- [scholar.google.co.uk/citations?user=t\\_c8oKIAAAA](https://scholar.google.co.uk/citations?user=t_c8oKIAAAA)
- [www.nordichi2016.org/program/tutorials](http://www.nordichi2016.org/program/tutorials)
- [www2.le.ac.uk/departments/computer-science/people/elaw/HCI-3T](http://www2.le.ac.uk/departments/computer-science/people/elaw/HCI-3T)
- <https://www.northumbria.ac.uk/about-us/our-staff/c/gilbert-cockton/>

### Relevant Publications

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2. Gilbert Cockton. Designing Worth: Connecting Preferred Means with Probable Ends, interactions, 15(4), July+August issue, 54-57, 2008.
3. Gilbert Cockton. When and Why Feelings and Impressions Matter in Interaction Design. Kansei 2009: Interfejs Użytkownika - Kansei w praktyce. 2009. Invited Keynote.
4. Gilbert Cockton, Sari Kujala, Piia Nurkka, and Taneli Hölttä. Supporting Worth Mapping with Sentence Completion in Proceedings of INTERACT 2009, Part II, (LNCS 5727), Springer, 566-581. 2009.
5. Gilbert Cockton. Making Designing Worth Worth Designing. Position Paper, CHI 2012 Workshop: Methods for Accounting for Values in Human-Centered Computing. [ii.tudelft.nl/ValuesInDesign/submissions/cockton.pdf](http://ii.tudelft.nl/ValuesInDesign/submissions/cockton.pdf)
6. Gilbert Cockton. Diffusion of Worth Mapping: The Worth of Resource Functions. CHI 2013 Workshop: Made for Sharing: HCI Stories of Transfer, Triumph & Tragedy. 2013.
7. Gilbert Cockton. Design isn't a shape and it hasn't got a centre: thinking BIG about post-centric interaction design. Proc. MIDI '13. ACM, Article 2, 16 pages. 2013, DOI=10.1145/2500342.2500344. Invited Keynote Address
8. Gilbert Cockton. You (have to) Design Design, Co-Design Included. Mareis, C., Held, M., and Joost, G. (eds): Wer gestaltet die Gestaltung? Praxis, Theorie und Geschichte des partizipatorischen Designs. Bielefeld: transcript. 181-205. 2011. Invited workshop summary.
9. Gilbert Cockton. A Critical, Creative UX Community: CLUF. Journal of Usability Studies, 10(1), 1-16. 2014. (Invited Editorial, available at <http://uxpajournal.org/a-critical-creative-ux-community-cluf/>)
10. Igor Garnik, Marcin Sikorski, and Gilbert Cockton. Creative sprints: an unplanned broad agile evaluation and redesign process. Proc. NordiCHI '14. ACM, 1125-1130, 2014.
11. Alan Woolrych, Kasper Hornbæk, Erik Frøkjær and Gilbert Cockton. Ingredients and Meals Rather Than Recipes: a Proposal for Research that Does Not Treat Usability Evaluation Methods as Indivisible Wholes, in IHCI, 27(10), 940-970, 2011.