

I400/H400/I590 Syllabus
Sustainability in HCI and Design



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Summary

This course focuses on sustainability in Human-Computer Interaction (HCI) and Design. There will be a mix of readings, discussion, and project work. The class size is small to create a friendly learning environment and a rich experience. You will consider how interaction design is implicated as an agency of sustainable and unsustainable practices. You will consider what can be changed. You will consider what may happen if sustainable practices are not implemented effectively. You will consider how interaction design may be implicated in any adaptation to fundamental changes in environmental conditions. As the instructor, this course aligns with my primary research interests. My goal is to share this expertise with you, to learn with you, and to prepare intellectually, practically, and optimistically for a future which may look different than the past.

Please review this syllabus carefully, as it contains many additional details.

H400 VT: SUSTAINABILITY IN HCI & DESIGN

CLSD 33909 RSTR 01:00P-03:45P T I2 122 Blevis E

Above class open to Hutton Honors College students only

Above class meets with INFO-I 400 and I 590

I400 VT: SUSTAINABILITY IN HCI & DESIGN

CLSD 33910 RSTR 01:00P-03:45P T I2 122 Blevis E

Above class open to undergraduates only

Above class meets with INFO-H 400 and I 590

I590 VT: SUSTAINABILITY IN HCI & DESIGN

33911 RSTR 01:00P-03:45P T I2 122 Blevis E

Above class open to graduates only

Above class meets with INFO-I 400 and H 400

Grading

40% Project Work (Teams)

40% Assigned Readings and Discussion (Individual)

20% Attendance and Participation (Individual)

Organization

The organization is subject to change, since the course is new.

In general, we will spend the first part of each class taking up an assigned reading. I will call on individual participants to read particular passages and comment, randomly but evenly. I may adjust the selection and amount of reading depending on the actual experience of the participants. We may sometimes use a scheme of dividing the readings among different groups in the class.

Also in general, we will spend the second part of each class working in team break-out groups, occasionally pausing to report to one another. The teams will have 2-3 participants depending on class size. During classes 2-3, we will have a warm up exercise in teams involving interpreting and revising diagrams from Intergovernmental Panel on Climate Change sources (IPCC). These warm up exercises are also an opportunity to understand the scientific bases with some small depth. If you took I561 with me in spring 2015, you may be asked to help others with these exercises, and augment your understanding over the more cursory treatment in that class. The projects for the remaining weeks are set up as a “Pass the Baton” style. During classes 4-9, teams will do the design research work for one five themes I list below and will describe fully in class. During classes 10-16, each team will switch to another one of the five themes to complete the design synthesis parts of the project. They will use the design research inherited from another team, and the team who provided the inheritance will serve as mentors for the team who have inherited the research. I will explain this in class more fully, and tabulate the scheme below:

Diagrams (weeks 2-3) Teams	Design Research (weeks 4-9) Theme : Teams	Design Synthesis (weeks 10-16) Theme : Team (Mentors)
D1 : A, B	T1 (Durability) : A, B	T1 (Durability) : C (A), D (B)
D2 : C, D	T2 (Fashion) : C, D	T2 (Fashion) : E (C), F (D)
D3 : E, F	T3 (Food) : E, F	T3 (Food) : G (E), H (F)
D4 : G, H	T4 (Collapse) : G, H	T4 (Collapse) : I (G), J (H)
D5 : I, J	T5 (Place) : I, J	T5 (Place) : A (I), B (J)

Note (9.14.2015): We may modify this scheme to “Pass the Baton” more often than this table represents.

There will be two presentations. The format for the presentations is a 6 minute 40 second video, followed by questions and answers. There is no exam.

Use of the IU Research and Teaching Preserve

I have asked to reserve the main theatre in the IU Research and Teaching Preserve on Tuesdays 1:00-3:45 pm during the fall semester, modulo working out the transportation logistics among the students who enroll.

BAESS

I will contact Sarah Mincey and ask if this class may be considered for inclusion in the Bachelor of Arts in Environmental and Sustainability Studies degree program.

Schedule

Class	Date	Theory	Readings (Subject to Change)	Project
1	8.25	Overview		
2	9.1	Scientific Basis I	IPCC. 2014. <i>Climate Change 2014 AR5 Synthesis Report: Summary for Policy Makers</i> . www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_SPMcorr1.pdf accessed 01.27.2015	Explain Selected Diagram
3	9.8	Scientific Basis II	IPCC, 2014: Summary for Policymakers. In: <i>Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change</i> [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1-32.	Revise Selected Diagram
4	9.15	Sustainability in HCI I	DiSalvo, Carl, Phoebe Sengers, and Hrönn Brynjarsdóttir. 2010. Mapping the landscape of sustainable HCI. In <i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '10)</i> . ACM, New York, NY, USA, 1975-1984. Blevis, Eli. 2007. Sustainable interaction design: invention & disposal, renewal & reuse. In <i>Proceedings of the SIGCHI conference on Human factors in computing systems (CHI '07)</i> . ACM, New York, NY, USA, 503-512.	Choose Pairs/Topic: <ul style="list-style-type: none"> • Durability and Attachment • Re-conceptualizing Fashion • Sustainable Food Practices • Collapse Informatics • Place and Displacement
5	9.22	Sustainability in HCI II	M. Six Silberman, Lisa Nathan, Bran Knowles, Roy Bendor, Adrian Clear, Maria Håkansson, Tawanna Dillahunt, and Jennifer Mankoff. 2014. Next steps for sustainable HCI. <i>interactions</i> 21, 5 (September 2014), 66-69. Bran Knowles, Lynne Blair, Mike Hazas, and Stuart Walker. 2013. Exploring sustainability research in computing: where we are and where we go next. In <i>Proceedings of the 2013 ACM international joint conference on Pervasive and ubiquitous computing (UbiComp '13)</i> . ACM, New York, NY, USA, 305-314. Eli Blevis. 2012. The PRInCiPles Design Framework . In John M. Carroll (ed.). <i>Human-Computer Interaction Series, 1, Volume 20, Creativity and Rationale</i> , Springer, Pages 143-169.	Predispositions
6	9.29	Design Criticism and Critical Design	Bardzell, Jeffrey and Shaowen Bardzell. 2013. What is "critical" about critical design? In <i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '13)</i> . ACM, New York, NY, USA, 3297-3306. Paul Dourish. 2010. HCI and environmental sustainability: the politics of design and the design of politics. In <i>Proceedings of the 8th ACM Conference on Designing Interactive Systems (DIS '10)</i> . ACM, New York, NY, USA, 1-10. Blevis, Eli. 2006. Advancing Sustainable Interaction Design: Two Perspectives on Material Effects. <i>Design Philosophy Papers. 2006 #4</i> . Team D/E/S, Queensland, AU. ISSN 1448-7136	Research I
7	10.6 Field Trip	Photographing Sustainable and Unsustainable Practices		Research II

8/9	10.13 Extended Class			Interim Presentations (Video)
				SWITCH TOPICS, MENTOR ROLES
10	10.20	Invention and Disposal	Remy, Christian, Silke Gegenbauer, and Elaine Huang. 2015. Bridging the Theory-Practice Gap: Lessons and Challenges of Applying the Attachment Framework for Sustainable HCI Design. In <i>Proceedings of the SIGCHI conference on Human factors in computing systems (CHI '15)</i> . ACM, New York, NY, USA. Huang, Elaine M., and Khai N. Truong. 2008. Breaking the disposable technology paradigm: opportunities for sustainable interaction design for mobile phones. In <i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '08)</i> . ACM, New York, NY, USA, 323-332.	Insights
11	10.27	Renewal and Reuse	Pierce, James and Eric Paulos. 2011. Second-hand interactions: investigating reacquisition and dispossession practices around domestic objects. In <i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11)</i> . ACM, New York, NY, USA, 2385-2394 Odom, William, James Pierce, Erik Stolterman, and Eli Blevis. 2009. Understanding why we preserve some things and discard others in the context of interaction design. In <i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '09)</i> . ACM, New York, NY, USA, 1053-1062.	Concepts
12	11.3	Quality and Equality	Jung, Heekyoung, Shaowen Bardzell, Eli Blevis, James Pierce, & Erik Stolterman. 2011. How Deep Is Your Love: Deep Narratives of Ensoulment and Heirloom Status. <i>International Journal of Design</i> 5(1): 85-98. ISSN: 1994-036X (online); 1991-3761 (print).	Prototypes
13	11.10	Ownership and Identity	Pan, Yue, David Roedl, Eli Blevis, and John C. Thomas. 2015. Fashion Thinking: Fashion Practices and Sustainable Interaction Design. <i>International Journal of Design</i> 9(1) (In Press).	Prototypes
14	11.17	Natural Models and Reflection	Tomlinson, Bill, Eli Blevis, Bonnie Nardi, Donald J. Patterson, M. SIX Silberman, and Yue Pan. 2013. Collapse informatics and practice: Theory, method, and design. <i>ACM Transactions on Computer Human Interaction</i> 20, 4, Article 24 (September 2013), 26 pages.	Strategies
	11.24 Thanksgiving – No Class			
15/16	12. 1 Extended Class			Final Presentations (Video)
	12.8 Pre- Exams Week – No Class			
	12.15 Final Exam Week – No Exam			

The 2015 Sustainability Community of Practice

I attended the spring 2015 Indiana University Sustainability Community of Practice (SCoP) for faculty who are teaching classes related to sustainability: <http://sustain.indiana.edu/>. Let me begin by thanking those involved for their help in providing an opportunity to craft this syllabus.

Course

This course I will offer for the first time this fall is titled “Sustainability in HCI and Design.” In my research, I am best known for my work on sustainable interaction design and I list a few significant publications below. This is now the first time that I will teach a class that is specifically targeted at my primary research focus. Another important research focus for me is visual thinking in HCI and Design, and I already teach a class with this focus at both graduate and undergraduate levels. This class has integrated some aspects of sustainability. This new class is targeted at participation at all levels, undergraduate and graduate (400 level and 500 level) in accordance with learning theories I call One Room School House (ORSH) and Design Challenge Based Learning (DCBL). These learning theories are described in Blevins (2010; 2012).

Concerns

In addition to the sustainability themes, we will also adopt a transdisciplinary perspective in this class. By transdisciplinarity, I mean the notion of *transcending* disciplinary boundaries in the service a motivated goal with broad societal benefits. This is not quite the same idea as interdisciplinarity nor multidisciplinarity, which concern the ways in which individual disciplinary domains of expertise and collections of methods are combined or may inform collaborations. Rather, the emphasis is on starting with a larger goal and appealing to whichever expert domains and methods are needed in its service.

In the thematic area of *Sustainable Interaction Design in HCI and Design*, I will share my interests in re-thinking:

1. How interaction designers account for the things they design, insisting for example, that any design of an interactive artifact also includes an account of the materials that are displaced by that newly invented artifact.

I will also share my interests in understanding:

2. How interaction design can contribute to renewal and reuse;
3. How interaction design can promote quality as a matter of designing things that provide equality of experience beyond original ownership;
4. How ownership and identity can be de-coupled as a matter of interaction design, and;
5. How natural models may be integrated into interaction design.

These interests have led to specific themes, namely

1. notions of durability and attachment—leading to personal inventories and deep narrative design methods,
2. re-conceptualizing fashion as an instrument of sustainable rather than unsustainable design,
3. sustainable food practices,
4. collapse informatics—the notion of emphasizing adaptation to changing conditions as well as mitigation of climate change, and
5. some other themes we will cover in class.

We will cover five principles of sustainable interaction design and a rubric of material effects (RoME) that appear in one of the readings.

The five design principles are

1. linking invention and disposal,
2. promoting renewal and reuse,
3. promoting quality and equality,
4. de-coupling ownership and identity, and
5. using natural models and reflection.

These principles correspond to the interests I state in the summary above.

The rubric of material effects—with elements ordered approximately from least sustainable to most sustainable—is

1. disposal,
2. salvage,
3. recycling,
4. remanufacturing for reuse,
5. reuse as is,
6. achieving longevity of use,
7. sharing for maximal use,
8. achieving heirloom status,
9. finding wholesome alternatives to use, and
10. active repair of misuse.

These five principles and RoME have served to some extent as a programmatic guide for further contributions and as a theoretical, methodological framework of analysis for various domain areas within sustainable interaction design and HCI.

Plan

The theoretical perspective include notions of design criticism and critical design. In Blevis (2006), I distinguish between *design criticism* – what is needed to understand and interpret present ways of being, and *critical design* – what is needed to ensure that our actions lead to sustainable future ways of being. This notion of critical design as *design that matters* is different than but not incompatible with the notion of critical design as *design that makes you think* that is in vogue these days in HCI, owing to Dunne and Raby (2001) and Jeff and Shaowen Bardzell's (2013) account inspired by Dunne and Raby. In Blevis (2007), I wrote that time being what it is, critical design takes place in the absence of complete understandings of present ways of being. Thus, design criticism and critical design are mutually dependent, ongoing, and co-evolving acts. Design without design criticism is unlikely to create *critical design* and criticism without critical design is unlikely to create *design criticism*. I plan to use this framing of design in terms of design criticism and critical design and ask you to apply it to specific thematic domains—primarily those I list above, namely

Theme: Durability and Attachment

Learning Goals: You will use the design research methods of personal inventories and deep narratives to understand the extent to which and possible reasons for why digital materiality is less durable and less treasured than other forms of materiality, if it is.

Theme: Re-conceptualizing Fashion as an Instrument of Sustainable rather than Unsustainable Interaction Design

Learning Goals: You will need to rethink the epistemological foundations and ontological implications of how interactive products are designed and marketed for premature obsolescence, asking themselves questions such as: Is it possible to make it fashionable to prefer old things to new ones? Is it possible to make it fashionable to renew or reuse things rather than buy anew? Do people make decisions about digital materials as a matter of fashion? How can interaction designers integrate notions of fashion as an agency of sustainable practices into their design?

Theme: Sustainable Food Practices

Learning Goals: You will consider design research methods and design principles to understand how interactivity can be used to scaffold more sustainable food practices, such as urban farming, locavorism, mechanisms of awareness of food origins, and other related issues.

Theme: Collapse Informatics

Learning Goals: The natural world proceeds with the consequences of climate change, regardless of humanity's will. We may succeed in mitigating climate change, but we may not. You will consider the notion of Collapse Informatics—the idea that we must focus on adaptability in sustainable interaction design, as much as mitigation of unsustainable behaviors. Design methods include design fictions—the construction of possible future scenarios which may change the contexts of design, interaction design in particular. I will ask you to ground your understanding in terms of scientific predictions, such as those described in the IPCC (2014a; 2014b) reports.

Theme: Place and Displacement

Learning Goals: The SCoP program asked participants to consider place as an organizing theme for understanding sustainability. This theme appears in the Design literature about sustainability as the principle of “digging where you stand” (Fry, 1999). As a complement to concerns for designing local actions, I will ask you to also consider design for displacement—that is design motivated by questions like: Can I continue to live where I live and where will I go if I can't? What will grow where? If I can continue to live where I live, how can I accommodate others who need to move to where I am? These questions entail notions of collapse informatics and notions of values orientations.

General Statement of Individual Learning Goals

You will: Know how to interpret (scholarly) literatures and news about sustainability as implicated in and as implications for interaction design; Engage in design criticism and critical design related to sustainability in HCI and interaction design.

Interdisciplinary Learning Goals

You will: Adopt a transdisciplinary perspective—that is a values-rich perspective that transcends disciplinary boundaries (Nicolescu 2002; Max-Neef, 2006; Blevins & Stolterman, 2008; 2009).

Additional References and Selected Resources

- Bardzell, Jeffrey and Shaowen Bardzell. 2013. What is “critical” about critical design? In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '13)*. ACM, New York, NY, USA, 3297-3306.
- Blevis, Eli. 2006. Advancing Sustainable Interaction Design: Two Perspectives on Material Effects. *Design Philosophy Papers*. 2006 #4. Team D/E/S, Queensland, AU. ISSN 1448-7136
- Blevis, Eli, and Erik Stolterman. 2007. Ensoulment and Sustainable Interaction Design. In *Proceedings of International Association of Design Research Societies Conference IASDR 2007*. Hong Kong Polytechnic University School of Design, Hung Hom, Hong Kong.
- Blevis, Eli. 2007. Sustainable interaction design: invention & disposal, renewal & reuse. In *Proceedings of the SIGCHI conference on Human factors in computing systems (CHI '07)*. ACM, New York, NY, USA, 503-512.
- Blevis, Eli, and Erik Stolterman. 2008. The Confluence of Interaction Design and Design: from Disciplinary to Transdisciplinary Perspectives. In *Proceedings of the 2008 Design Research Society Conference*. Sheffield, UK: Design Research Society. 344/1-12.
- Blevis, Eli, and Erik Stolterman. 2009. Transcending disciplinary boundaries in interaction design. *interactions* 16, 5 (September 2009), 48-51.
- Blevis, Eli. 2010. Design challenge based learning (DCBL) and sustainable pedagogical practice. *interactions* 17, 3 (May 2010), 64-69.
- Blevis, Eli, and Shunying Blevis. 2010. Hope for the best and prepare for the worst: interaction design and the tipping point. *interactions* 17, 5 (September 2010), 26-30.
- Blevis, E. 2012. The One Room School House & Design Challenge Based Learning for design-oriented HCI education: Initial results, reflective hypotheses, & collaborative issues. In *Collaboration Technologies and Systems (CTS), 2012 International Conference on* (pp. 359-366). IEEE.
- Blevis, E. 2012. The PRInCiPleS Design Framework. In Jack Carroll (Ed.). *Human-Computer Interaction Series, 1, Volume 20, Creativity and Rationale*, Springer, Pages 143-169. Also appears as: Eli Blevis. 2011. The PRInCiPleS Design Framework. *Indiana University School of Informatics & Computing Human-Computer Interaction Design (HCI/d) Program Technical Report* Number HCID-2011-001.
- Blevis, Eli, Kenny Chow, Ilpo Koskinen, Sharon Poggenpohl, and Christine Tsin. 2014. Billions of interaction designers. *interactions* 21, 6 (October 2014), 34-41.
- Choi, Jaz Hee-jeong, and Eli Blevis. 2010. HCI & sustainable food culture: a design framework for engagement. In *Proceedings of the 6th Nordic Conference on Human-Computer Interaction: Extending Boundaries*, ACM, Reykjavik, Iceland, pp. 113-117.
- Choi, Jaz Hee-jeong, and Eli Blevis. 2011. Advancing design for sustainable food cultures. In Foth, Marcus, Forlano, Laura, Satchell, Christine, & Gibbs, Martin (Eds.) *From Social Butterfly to Engaged Citizen: Urban Informatics, Social Media, Ubiquitous Computing, and Mobile Technology to Support Citizen Engagement*. MIT Press.
- DiSalvo, Carl, Phoebe Sengers, and Hrönn Brynjarsdóttir. 2010. Mapping the landscape of sustainable HCI. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '10)*. ACM, New York, NY, USA, 1975-1984.

Dourish, Paul. 2010. HCI and environmental sustainability: the politics of design and the design of politics. In *Proceedings of the 8th ACM Conference on Designing Interactive Systems (DIS '10)*. ACM, New York, NY, USA, 1-10.

Dunne, Anthony, and Fiona Raby. 2001. *Design Noir: The Secret Life of Electronic Objects*. Springer (out of print).

Dunne, Anthony. 2006. *Hertzian Tales: Electronic Products, Aesthetic Experience, and Critical Design*. The MIT Press.

Fry, Tony. 1999. *A new design philosophy: an introduction to defuturing*. UNSW Press.

Hanks, Kristin, William Odom, David Roedl, and Eli Blevis. 2008. Sustainable millennials: attitudes towards sustainability and the material effects of interactive technologies. In *Proceedings of the twenty-sixth annual SIGCHI conference on Human factors in computing systems (CHI '08)*. ACM, New York, NY, USA, 333-342.

Huang, Elaine M., and Khai N. Truong. 2008. Breaking the disposable technology paradigm: opportunities for sustainable interaction design for mobile phones. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '08)*. ACM, New York, NY, USA, 323-332.

IPCC. 2014. *Climate Change 2014 AR5 Synthesis Report: Summary for Policy Makers*. www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_SPMcorr1.pdf accessed 01.27.2015

IPCC, 2014: Summary for Policymakers. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1-32.

Jung, Heekyoung, Shaowen Bardzell, Eli Blevis, James Pierce, & Erik Stolterman. 2011. How Deep Is Your Love: Deep Narratives of Ensoulment and Heirloom Status. *International Journal of Design* 5(1): 85-98. ISSN: 1994-036X (online); 1991-3761 (print).

Knowles, Bran, Lynne Blair, Mike Hazas, and Stuart Walker. 2013. Exploring sustainability research in computing: where we are and where we go next. In *Proceedings of the 2013 ACM international joint conference on Pervasive and ubiquitous computing (UbiComp '13)*. ACM, New York, NY, USA, 305-314.

Martin, Bella, and Bruce Hanington. *Universal methods of design: 100 ways to research complex problems, develop innovative ideas, and design effective solutions*. Beverly, MA : Rockport Publishers, 2012.

Max-Neef, Manfred A. 2005. Foundations of transdisciplinarity. *Ecological Economics* 53 (2005) 5– 16.

Nelson, Harold, and Erik Stolterman. 2012. *The Design Way (Second Edition)*. MIT Press.

Nicolescu, Basarab. 2002. *Manifesto of Transdisciplinarity*. Translation: Karen-Claire Voss. SUNY Press, Albany NY.

Odom, William, James Pierce, Erik Stolterman, and Eli Blevis. 2009. Understanding why we preserve some things and discard others in the context of interaction design. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '09)*. ACM, New York, NY, USA, 1053-1062.

Pan, Yue, Chit Meng Cheong, and Eli Blevis. 2010. The climate change habitability index. *interactions* 17, 6 (November 2010), 29-33.

Pan, Yue, David Roedl, John C. Thomas, and Eli Blevis. 2012. Re-conceptualizing fashion in sustainable HCI. In *Proceedings of the Designing Interactive Systems Conference (DIS '12)*. ACM, New York, NY, USA, 621-630.

Pan, Yue, and Eli Blevis. 2014. Fashion thinking: lessons from fashion and sustainable interaction design, concepts and issues. In *Proceedings of the 2014 conference on Designing interactive systems (DIS '14)*. ACM, New York, NY, USA, 1005-1014.

Pan, Yue, David Roedl, Eli Blevis, and John C. Thomas. 2015. Fashion Thinking: Fashion Practices and Sustainable Interaction Design. *International Journal of Design* 9(1) (In Press).

Pierce, James and Eric Paulos. 2011. Second-hand interactions: investigating reacquisition and dispossession practices around domestic objects. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11)*. ACM, New York, NY, USA, 2385-2394.

Remy, Christian, Silke Gegenbauer, and Elaine Huang. 2015. Bridging the Theory-Practice Gap: Lessons and Challenges of Applying the Attachment Framework for Sustainable HCI Design. In *Proceedings of the SIGCHI conference on Human factors in computing systems (CHI '15)*. ACM, New York, NY, USA.

Tomlinson, Bill, M. Six Silberman, Donald Patterson, Yue Pan, and Eli Blevis. 2012. Collapse informatics: augmenting the sustainability & ICT4D discourse in HCI. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '12)*. ACM, New York, NY, USA, 655-664.

Tomlinson, Bill, Eli Blevis, Bonnie Nardi, Donald J. Patterson, M. SIX Silberman, and Yue Pan. 2013. Collapse informatics and practice: Theory, method, and design. *ACM Transactions on Computer Human Interaction* 20, 4, Article 24 (September 2013), 26 pages.

Accommodations & Feedback

We welcome your feedback. We will do our best to accommodate specific requests if they are reasonable and have merit.

Academic Misconduct

The class is morally and procedurally bound by IU's policies on academic misconduct, the details of which you can read about at the following website: www.indiana.edu/~code/code/index.shtml

Religious Observance

In accordance with the Office of the Dean of Faculties, any student who wishes to receive an excused absence from class must submit a request form available from the Dean of Faculties for each day to be absent. This form must be presented to the course professor by the end of the second week of the semester. A separate form must be submitted for each day. The form must be signed by the instructor, with a copy retained by instructor, and the original returned to the student. Information about the policy on religious observance can be found here: www.indiana.edu/~vpfaa/holidays.shtml

English

If English is not your native language or you are otherwise shy about speaking in class, please do not worry. You will not be penalized in any way for making contributions to the class in less than perfect English or for taking time to compose your answers. You are welcome to say what you want to say in your language of choice first and then ask for help from others to translate to English. I will frequently emphasize to the class the need for all of us to be supportive of each other when it comes to contributing to the discussions. There is no need to feel rushed when responding to questions in class—an important part of the class is the construction of a feeling of community with the faculty and your peers.

Important Notice

As your instructor, one of my responsibilities is to help create a safe learning environment on our campus. Title IX and our own Sexual Misconduct policy prohibit sexual misconduct. If you have experienced sexual misconduct, or know someone who has, the University can help. I encourage you to visit <http://stopsexualviolence.iu.edu/> to learn more. If you are seeking help and would like to speak to someone confidentially, you can make an appointment with a Mental Health Counselor on campus (contact information available at <http://stopsexualviolence.iu.edu/employee/confidential.html>).

It is also important that you know that federal regulations and University policy require me to promptly convey any information about potential sexual misconduct known to me to our Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, they will work with a small number of others on campus to ensure that appropriate measures are taken and resources are made available to the student who may have been harmed. Protecting a student's privacy is of utmost concern, and all involved will only share information with those that need to know to ensure the University can respond and assist.