

Automating Experience: Does the ‘automated home’ diminish or deepen user experience?

Keywords: Automation; Experience; Participation; Sustainability

1. Catalyst Information

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2. Conversation Description

In a technologically streamlined world, our dominant version of reality comes with the majority of problems mitigated through the constant and rapid evolution of technology systems. One notable progression is that of *automating technologies* within the home, which have been suggested deliver rich experiences that are both immersive and smart.

The vision for automated living spaces sees people interacting easily within digital environments where by electronics are sensitive to our needs, personalized to requirements, anticipatory of behaviour and responsive to our presence all enabled by the extraordinary potential of the *Internet of Things*. There are significant benefits that accompany these forms of development. Yet, for all its affordances, there are larger issues still to be explored concerning agency and potential influence of ambient intelligence and persuasive technologies. In these smart connected environments, your fridge knows when the milk is low and orders more, domestic heating systems harmoniously acclimatise with the weather



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and your lighting synchronises in real time to reflect your mood, all in effort to 'improve the living experience'. However, it could be argued that these systems cut users from the decision-making and experience making process all together? As by destabilizing fluidity and pace of the subject-object interaction, users are empowered to contemplate their actions and ultimately, their motivations. The automated home fundamentally alters the landscape of our day-to-day experience, and design researchers are only just beginning to explore the implications of this shift.

Hosted in partnership with Philips Lighting and the University of Brighton, this conversation explores the relationships between the *automated home* and user experience, asking: Does the automated home diminish or deepen user experience?

It will be a lively debate with two opposing perspectives presented followed by a fully interactive audience discussion focusing on uncovering the potential opportunities and challenges that exist within automated living environments.

2.1 Preparing your Conversation proposal for submission

This 90-minute Conversation, hosted in partnership with Philips Lighting and the University of Brighton, explores the relationships between the *automated home* and user experience, asking: Does the automated home diminish or deepen user experience?

In a technologically streamlined world, our dominant version of reality comes with the majority of problems mitigated through the constant and rapid evolution of technology systems. One notable recent progression is that of *automating technologies* within the home, which have been suggested deliver rich experiences that are both immersive and smart. The vision for automated living spaces sees people interacting easily within digital environments where by electronics are sensitive to our needs, personalized to our requirements, anticipatory of behaviour and responsive to our presence all enabled by the extraordinary potential of the *Internet of Things*. There are significant benefits that accompany these forms of smart product development. Yet, for all its affordances, there are still larger issues to be further explored concerning agency and potential impact and influence of ambient intelligence and persuasive technologies.

Described as a convergence of information technology and cognitive science, Verbeek (2009) states that these types of innovation 'blur the boundaries' between people and technology, and that within these newly *designed* systems authority lies with designers to anticipate any potential concerns and create inherently responsible systems. Developers argue we have the potential to greatly enhance the services we already employ, and provide an opportunity to 'improve the living experience' (Wilson, Hargreaves & Hauxwell-Baldwin, 2015) In these connected environments, your fridge will know when milk is running low and orders more, domestic heating systems synchronise harmoniously with the weather and your lighting customised in real time to reflect your mood.

However, will these systems cut users from the decision-making and experience making process all together? As it is known, that destabilizing both the fluidity and pace of subject-object interaction, users are empowered to stop, think and contemplate what they are doing and, ultimately, why they are doing it. (Chapman, 2005). Furthermore, increased functionality and technical performance is not necessarily commensurate with user experiences and may serve to the contrary.

The majority of existing research is routed in computing, healthcare and environmental engineering exploring this in relation to sustainable energy consumption - smart homes existing within smart grids (Balta-Ozkan et al. 2013; Paetz, Dutschke & Fichtner, 2012), and assisted living - opportunities for prolonged independence and increased wellbeing (Li, Lu & McDonald-Maier, 2015; Chatterjee & Price, 2009). Moreover, these innovations are already being implemented and design researchers are only just beginning to explore and how the automated home fundamentally alters the landscape of our day-to-day experience, and what are the implications of this shift.

This conversation aims to spark debate and discussion by demonstrating two opposing perspectives within this space focusing on uncovering potential opportunities, challenges and threats that exist within automated living environments.

3. Organizing research question

Does the *automated home* diminish or deepen user experience?

4. Set-up of your session

In their presentations, catalysts 1 and 2 will adopt deliberately opposing sides of the debate so as to introduce the audience to a wide spectrum of opinion before the conversation gets going.

1. Prof Jonathan Chapman: Facilitator and presenter (automated home will diminish UX)
2. Dr Jon Mason: Facilitator and presenter (automated home will deepen UX)
3. Dr Dzmitry Aliakseyeu: Lead Facilitator
4. Merryn Haines-Gadd: Co-Facilitator

5. Type of space and equipment required

We will need a room that seat up to 40 people with the ability to break off into smaller groups within the space for discussion. AV equipment: microphones and projector.

6. Dissemination strategy

During the event, our co-facilitator will record the discussion in written form; these notes will then be distilled into a list of ten seminal points; five opportunities and five challenges of the automated home that will be feedback to the audience at the conclusion of conversation for final reflection. Following the conference, the conversation will be written up in the form of a report.

7. References

- Balta-Ozkan, N., Davidson, R., Bicket, M., & Whitmarsh, L. (2013). The development of smart homes market in the UK. *Energy*, 60, 361–372.
- Chapman, J. (2005). *Emotionally durable design: Objects, experiences and empathy*. London: Earthscan.
- Chatterjee, S., & Price, A. (2009). Healthy Living with Persuasive Technologies: Framework, Issues, and Challenges. *Journal of the American Medical Informatics Association*, 16(2), 171–178.
- Li, R., Lu, B., & McDonald-Maier, K. D. (2015). Cognitive assisted living ambient system: A survey. *Digital Communications and Networks*, 1(4), 229–252.
- Paetz, A.-G., Dütschke, E., & Fichtner, W. (2012). Smart Homes as a Means to Sustainable Energy Consumption: A Study of Consumer Perceptions. *Journal of Consumer Policy*, 35(1), 23–41.
- Verbeek, P.-P. (2009). Ambient Intelligence and Persuasive Technology: The Blurring Boundaries Between Human and Technology. *Nanoethics*, 3(3), 231–242.
- Wilson, C., Hargreaves, T., & Hauxwell-Baldwin, R. (2015). Smart homes and their users: a systematic analysis and key challenges. *Personal and Ubiquitous Computing*, 19(2), 463–476.

About the Catalysts:

Prof Jonathan Chapman is Director of Design Research Initiatives at the University of Brighton. His research has advanced design and business thinking in settings including Puma, The Body Shop, Philips Lighting, the House of Lords and the UN.

Dr Jon Mason is a Senior Scientist at Philips Lighting Research and since 2007 he has worked on concepts for new lighting applications and lighting UI. In 2013 he worked in the team that brought the Philips Hue internet connected lights to the market and continues to explore smart home and *internet of things* applications.

Dr Dzmitry Aliakseyeu is a Senior Scientist at Philips Lighting Research. Prior to this he has held position of Assistant Professor at the Industrial Design department of the Eindhoven University of Technology. At Philips he has worked on new lighting applications and interfaces, including Philips Hue - internet connected lighting

system for home. His research interests are in novel interaction technologies and user interaction in the area of connected lighting.

Merryn Haines-Gadd is a designer and PhD candidate at University of Brighton exploring the integration of Emotionally Durable Design, Service Innovation and Circular Economy thinking into consumer lighting, building upon her previous experience in design, innovation processes and sustainability.