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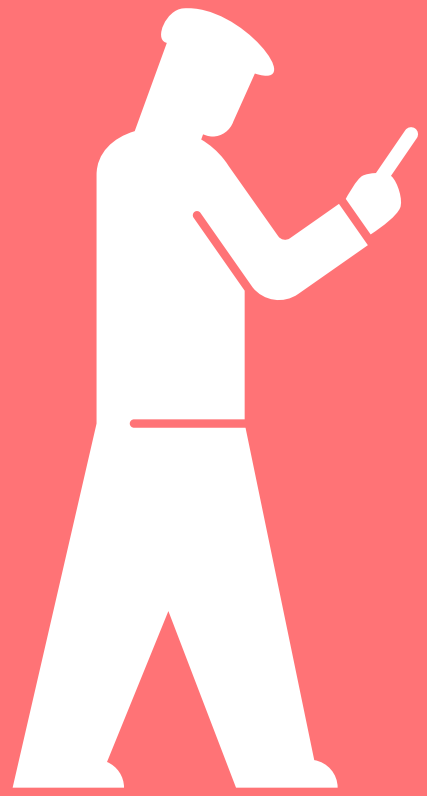
DING A MAGAZINE ABOUT THE INTERNET AND THINGS #1 AUTUMN 2017



Ding

A magazine about the Internet and things

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Words

John Thackara writes about live examples of what a sustainable future will be like. These projects, with a focus on social and ecological design, feature in his Doors of Perception workshops. He once drove a London bus (routes 73 and 134).

Solana Larsen edits Mozilla's Internet Health Report. Formerly she was managing editor of Global Voices, a community of bloggers that translate and report on citizen media worldwide. She once founded PuertoDansk, a Danish-Puerto Rican society.

ThingsCon (Max Krüger, Peter Bihr and Simon Höher) is a global community of practitioners around Internet of Things (IoT) and connected products that foster the creation of a human-centric & responsible IoT.

Gillian Crampton Smith is one of the world's leading academics in interaction design. She founded the Computer Related Design department at the Royal College of Art (RCA) and co-founded the Design Institute Ivrea. She currently teaches at H-Farm Education.

Vladan Joler directs the Share Foundation and is a professor at the New Media department at University of Novi Sad. He investigates invisible aspects of technology and recently researched Facebook's algorithms.

Jayne Wallace is a craft and design professor at Northumbria University. She explores digital jewellery and the act of making to support sense of self. She focuses on how contemporary craft and the digital can support living with dementia and bereavement.

Andrew Prescott researches Digital Humanities at the University of Glasgow. He is a medieval historian who previously worked in the Department of Manuscripts at the British Library, where he coordinated a number of digital projects, including most notably Electronic Beowulf.

Quicksand (Babitha George and Romit Raj) is an interdisciplinary consultancy in India that reflects on how a craft approach enables more thoughtful and long-lasting products. The studio also curates the UnBox Festival.

Justin Marshall is an associate professor at Northumbria University. He is a practice-based researcher focusing on the role and value of craft in interdisciplinary digitally orientated research projects, as such he is interested in both digital craft and crafting the digital.

Images

Eleni Kalorkoti graduated from Edinburgh College of Art in 2007, before training in screenprinting at Edinburgh Printmakers. She can now be found drawing pictures and making things in south London.

Alun Callender is a photographer with a passion for portraiture. He is fascinated by other people, their stories and what inspires them.

Sean Dooley is a mathematician turned photographer who likes to spend his time exploring the regions where human life meets its habitat.

Giulia Garbin is a London based Art Director, Graphic Designer and Illustrator. She is passionate about traditional print processes and believes in the importance of craftsmanship in design.

Editors

Jon Rogers is an academic at the University of Dundee and is a Senior Fellow with Mozilla's Open IoT Studio. His work explores the human intersection between digital technologies and the design of physical of things.

Pete Thomas is a designer and researcher at the University of Dundee. He co-founded the creative studio Tom Pigeon and the design and innovation agency Uniform.

Michelle Thorne leads the Mozilla Open IoT Studio, a research network for practitioners investigating and advocating for a healthier Internet of Things. She previously directed Mozilla's web literacy programs and produced the Mozilla Festival.

Letter from the Editor

Welcome to the first issue of DING, a magazine about the Internet and things. We founded this magazine because we saw a gap in the practice of slow, considered making and the breakneck speed of technology. We wanted to anthologize the sprawling online conversations and provide a place of reflection for people interested in crafting technology in more responsible ways. It is our place of refuge to discuss internet health and emerging technologies - slowly, sustainably and in print.

Our inaugural issue focuses on craft. We interview Gillian Crampton Smith, one of the founders of interaction design. She describes the practice of designing the right thing - and designing the thing right. As virtual and physical worlds converge, Gillian argues that we need craft to inform how we interact with connected objects.

John Thackara, renowned author and critic, writes that the Internet of Things is missing a value benchmark. "We've created a global infrastructure that is brilliant on means, but unambitious when it comes to ends," he laments. How might we build technology that considers the true cost of production while respecting human dignity and repairing the Earth?

Craft considers the materiality of an object throughout the object's lifecycle. Researcher Vladan Joler investigates the death and afterlife of things. From the graveyards of the cargo ships that carry our electronics to the cartels that shorten the lifespan of everyday objects, we begin to see the invisible forces that are making IoT a costly endeavor.

Ever since humans began making objects, we had to consider the materials available and the knowledge of how to shape them. Justin Marshall recounts how tools evolve and adapt based on local needs. Historian Andrew Prescott illustrates how constructing medieval cathedrals required sharing skills and even early computational thinking.

We also hear from the ThingsCon community, who curated a map of local solutions for local needs. The design studio Quicksand in Bangalore reflects on how they use a craft approach to build more thoughtful and long-lasting products. The digital jeweler Jayne Wallace describes how the Eames' India Report, written over fifty years ago, provides a template for how to think about craft and the internet today.

Today we live with digital technology that's primarily manufactured in Shenzhen and designed in Silicon Valley. Centralization of production means that there is less choice and less inclusion. We need decentralized ecosystems, where craft thrives so that people can deploy the materials around them to make local solutions that last a long time. We hope you enjoy this issue and that it sparks ideas for crafting technology in healthier ways.

Michelle

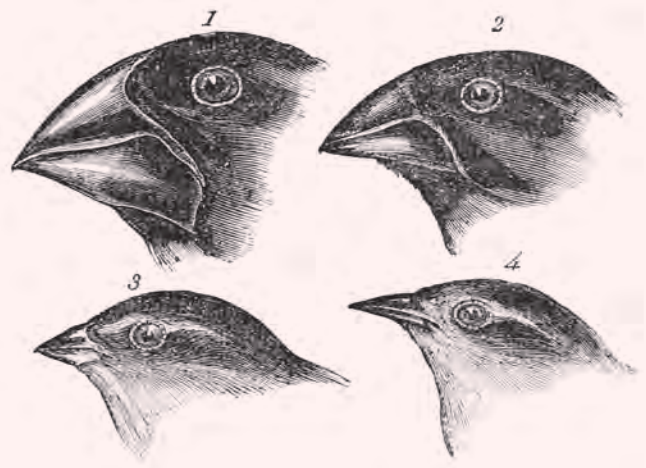
Workmen at Clonbrock Estate,
Ahascragh, County Galway,
Ireland 1870s.

Evolutionary Craft

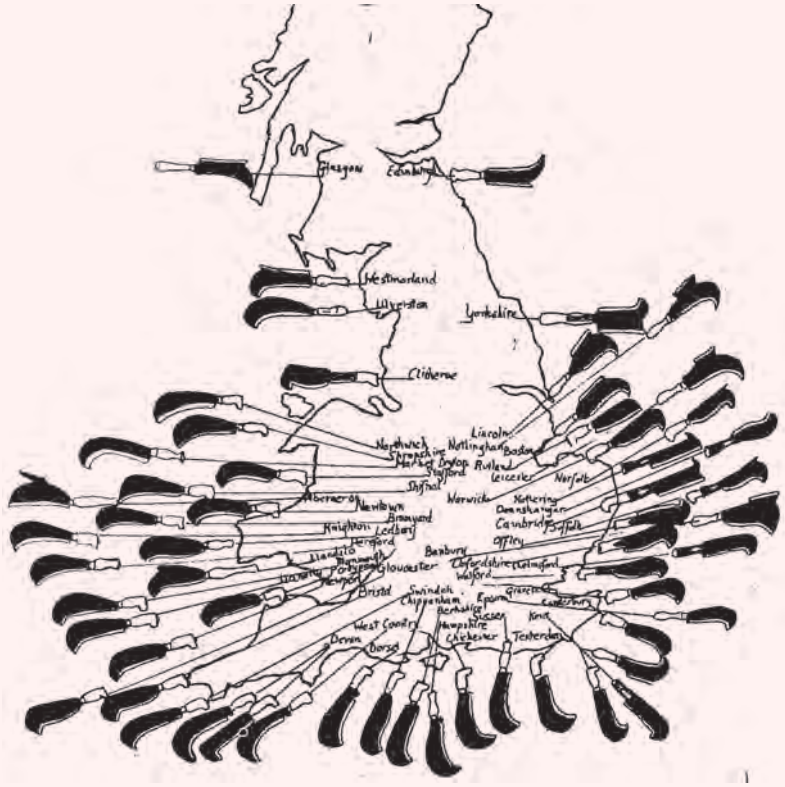
Justin Marshall

During a recent event with Mozilla's Open IoT Studio, we focused on the topic of decentralization. It got me thinking about the manifestation, and consequence, of pre-centralization. In particular, what did the 18th and 19th century pre-industrial landscape in the United Kingdom look like in terms of production, making, and craft? Obviously agriculture and its associated activities played a far larger role in the UK economy at the time, and it employed a larger labor force than it does in today. But agriculture is still significant in many countries' economies, and therefore I thought it is an appropriate place from which to start. Don't despair: this piece doesn't eulogize a pre-mechanized world of rural idylls, undivided labour and the happy artisan. Instead, I am interested in how decentralized production enabled an object's common form to proliferate into numerous varieties, each one responding to local contexts.

The billhook is a seemingly simple one-handed cutting tool used for a range of pruning, hedging and coppicing activities. Its history can be traced as far back as 1000 BCE, and it has close relatives all around the globe such as the Indian akkuruval. Like the lota discussed by Wallace in "The Internet as a Lota", the billhook is an artifact that found various forms over the course of thousands of iterations. These forms were not so much designed but rather evolved. Similar to Darwin's finches in the Galapagos, this evolution resulted in species of billhooks with a huge variety of specialist adaptations across geographical regions in the UK.

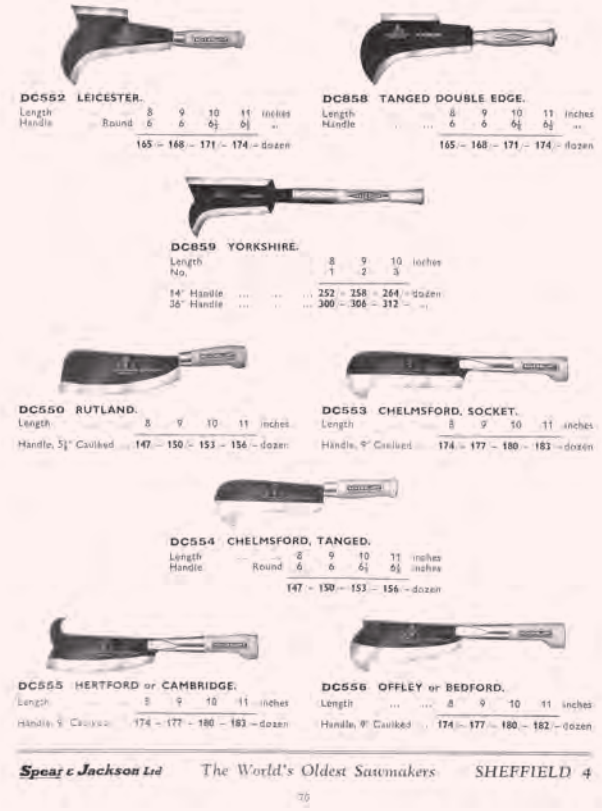


Darwin's finches by John Gould.



The range of English billhooks by Jack Wilson.

The shapes vary from county to county, and differences have also been identified from town to town, with a unique billhook even found in a village of only 50 people. Historically, these tools were produced by the local makerspace, i.e. the smithy. The regional differences found in blade length, beek shape, hooks size, etc. are rooted in specific local use that's driven by the particular environments of the region. So, even across a small country such as the UK, the differing climates and geologies privilege particular indigenous and crop species to flourish more than others. In turn, these crops require slightly differing approaches to management. This variation drives changes to make the most optimal tool for the job at hand.



"NEVERBLUNT" BILL HOOKS

DC552 LEICESTER.
Length ... 8 9 10 11 inches
Handle ... Round 6 6 6½ 6½ "
165/- 168/- 171/- 174/- dozen

DC858 TANGED DOUBLE EDGE.
Length 8 9 10 11 inches
Handle ... 6 6 6½ 6½ "
165/- 168/- 171/- 174/- dozen

DC859 YORKSHIRE.
Length 8 9 10 inches
No. 1 2 3
14" Handle ... ... 252/- 258/- 264/- dozen
36" Handle ... ... 300/- 306/- 312/- "

DC550 RUTLAND.
Length 8 9 10 11 inches
Handle, 5½" Caulked ... 147/- 150/- 153/- 156/- dozen

DC553 CHELMSFORD, SOCKET.
Length 8 9 10 11 inches
Handle, 9" Caulked ... 174/- 177/- 180/- 183/- dozen

DC554 CHELMSFORD, TANGED.
Length ... 8 9 10 11 inches
Handle ... Round 6 6 6½ 6½ inches
147/- 150/- 153/- 156/- dozen

DC555 HERTFORD or CAMBRIDGE.
Length ... 8 9 10 11 inches
Handle, 9" Caulked ... 174/- 177/- 180/- 183/- dozen

DC556 OFFLEY or BEDFORD.
Length ... ... 8 9 10 11 inches
Handle, 9" Caulked ... 174/- 177/- 180/- 182/- dozen

Spear & Jackson Ltd The World's Oldest Sawmakers SHEFFIELD 4

70

Spear and Jackson, Catalogue, 1955.

Interestingly, this is not a design innovation process. Rather than radically "rethinking" the production process or resulting solution, this system incrementally accrues the knowledge and skill to create hand-thought, not just handmade, artifacts. It empowers multiple communities of makers, not just a single designer, and it emphasizes the importance of local learning and knowledge. Arguably, this craft approach improves local resilience to change. For example, if the regional agricultural practices change slightly, there are the resources and knowledge to tweak the local tools accordingly. The power of this evolutionary craft approach, rather than design innovation, appears to have been recognized by the centralized, urban industrial manufacturers in the first half of the 20th century as they took over most of the UK's agricultural tool production. Even sales catalogues in the 1970's still list tens of billhook designs, often in multiple sizes, and still named after their regional heritage.

In conclusion, is this model of decentralized vernacular making of any relevance when considering the challenges of the 21st century internet and burgeoning field of IoT? Echoing Wallace's call to recognize the complexities of individual lived experience, we are seeing how centralized Internet platforms are restricting and limiting the individual's power to control and change the shape of their online lives. Major internet companies dominate our imagination for how we might interact online. What if, instead, there were more nuanced and poetic approaches?

I would promote similar aspirations for local communities being able to control their online lives. The billhook story provides a useful example of local production being independent of centralized systems. It is truly grounded in the needs of a local community and therefore facilitates the crafted evolution of artifacts and technologies that fit the specific needs of the context out of which they were born. There are significant challenges in developing this craft approach and grounding its ethos in real-world IoT projects, such as:

Skills: like the blacksmith, the skills of the technologist are not quickly acquired or easily won. Nurturing local competency and skill capacity is a long term mission, as is its continual development and sustenance.

People & Roles: if the ethos of this approach is grounded in local community knowledge and skills, what roles do external people, such as designers, technologists and researchers, play in facilitating and supporting the instigation of such activities?

Materials & Logistics: the nature of digital hardware, in its material composition and micro-scale complexity, makes it impossible to produce locally from scratch. But, like the raw materials imported into local blacksmith shops, the components should be efficiently sourced and delivered.

Time: the craft approach is slow, iterative and incremental, not rapid and disruptive. How can testing be carried out in a funding environment that wants and expects rapid results, and may promote impact, but rarely funds projects over a long enough period to support it?

I argue that there is value in a craft approach for the Internet of Things. Especially given their physical embodiment, Internet connected devices should be adapted to their local contexts. Local digital craft, that draws on local knowledge and needs, could create a healthier, more inclusive, more resilient way of working and connecting today.

Colophon

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Briefing
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Gillian Crampton Smith
Photography Alun Callender

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The Internet as a Lota
North Indian Brass Lota
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A Medieval Crash
Illustrated by Giulia Garbin

A Gandhian Dream
Photography Romit Raj

Evolutionary Craft
Workmen at Clonbrock Estate, Ahascragh, County Galway, Ireland 1870s
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