

Journal of Cultural Economy  
Proposal for a Special Issue

**Prototyping cultures: art, science and politics in beta**

*Guest editor: Alberto Corsín Jiménez*

**Statement of the overall rubric**

Prototypes have acquired much prominence and visibility in recent times. Software development is perhaps the case in point, where the release of non-stable versions of programmes has become commonplace, as is famously the case in free and open source software.<sup>1</sup> Developers are here known for releasing beta or work-in-progress versions of their programmes, as an invitation or call for others to contribute their own developments and closures. An important feature of prototyping in this case is the incorporation of *failure* as a legitimate and very often empirical realisation.

Prototyping has also become an important currency of explanation and description in art-technology contexts, where the emphasis is on the productive and processual aspects of experimentation.<sup>2</sup> Medialabs, hacklabs, community and social art collectives, dorkbots, open collaborative websites or design thinking workshops are spaces and sites where prototyping and experimentation have taken hold as both modes of knowledge-production and cultural and sociological styles of exchange and interaction. Common to many such endeavours are: user-centred innovation, where users are incorporated into artefacts' design processes; ICT-mediated forms of collaboration (email distribution lists, wikispaces, peer-to-peer digital channels), or; decentralised organisational structures. Some economists favour the term 'open innovation' to describe an emerging production paradigm.<sup>3</sup> From a historical and sociological angle, however, the backdrop of such cultures of prototyping is not infrequently connected, if in complex and not always obvious ways, with a variety of artistic vanguards, the do-it-yourself, environmental and recycling movements, even the development of cybernetic philosophy.<sup>4</sup>

Experimentation has also been at the centre of recent reassessments of the organisation of laboratory, expert and more generally epistemic cultures in the sciences.<sup>5</sup> An interesting development is the shift in emphasis from the experimental

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<sup>1</sup> Christopher M. Kelty, *Two bits: the cultural significance of free software* (Durham and London: Duke University Press, 2008).

<sup>2</sup> Susanne Küchler, «The prototype in 20th-century art», *Visual Communication* 9, n° 3 (2010): 301-312.

<sup>3</sup> Henry Chesbrough, *Open innovation: the new imperative for creating and profiting from technology* (Boston, Mass.: Harvard Business School Press, 2005).

<sup>4</sup> Fred Turner, *From counterculture to cyberculture: Stewart Brand, the Whole Earth network, and the rise of digital utopianism* (Chicago: The University of Chicago Press, 2006).

<sup>5</sup> On the notion of an experimental system, see Hans-Jörg Rheinberger, *Toward a history of epistemic things: synthesizing proteins in the test tube* (Stanford, California: Stanford University Press, 1997).

as a knowledge-site to the experimental as a social process<sup>6</sup>: for example, in open access publishing, or more generally in open collaborative scientific exchanges, where sociality and social exchange often become the limit-tests of experimentation itself.

In art, design, science, even entrepreneurial and political organisation, the languages of openness and open-endedness, of provisionality and experimentation, are thus taking hold as models for cultural practice. The prototype works as descriptor for both an epistemic object and an epistemic culture.<sup>7</sup> It is a language of, and reference for, a new techno-political consciousness of craft, skill and communal self-organisation. The experimental and open-ended qualities of prototyping have become a surrogate for new cultural experiences and processes of democratisation.

In an age of audit justifications, social impact and ethical certainties, the seductiveness of the prototype is hard to miss. Here is an epistemic culture built on collaboration and participation, provisionality, recycling and reuse, experimentation and creativity, which seems as much oriented to the production of technological artefacts and devices as it is to the social engineering of hope. If the culture of prototyping indeed prototypes hope, shouldn't we all hope for prototyping cultures more generally? Could the prototype figure as a design for an anthropology of the contemporary?<sup>8</sup>

There is to this day no academic collection or monograph that addresses the 'prototype' as figure of our contemporary. The prototype offers in this sense a privileged vantage point from where to critically examine some of the key debates in social theory today. Thus, the artefactual and object-orientation of prototyping feeds directly into recent discussions about the materiality of political process<sup>9</sup>. The intrinsic futurity of the prototype addresses too some crucial questions about the hopefulness and promise of critical and collaborative work<sup>10</sup>. Prototypes are also inscriptive objects in their own right: objects that hold within various biographical, techno-scientific and cultural lines of flight. They are 'things that talk'<sup>11</sup>, and that in this capacity can contribute much to present discussions about the objectual and material qualities of culture. Last, the prototype's porosity, indefiniteness and epistemic interdisciplinarity as a 'boundary object' offers new materials with which to think the status of models and model-building in science, art and cultural production at large.<sup>12</sup>

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<sup>6</sup> On 'culture' as an experimental system, see Michael M. J. Fischer, *Anthropological futures* (Durham and London: Duke University Press, 2009).

<sup>7</sup> I borrow the notion of 'epistemic culture' from Karin Knorr-Cetina, *Epistemic cultures: how the sciences make knowledge* (Cambridge, Mass.: Harvard University Press, 1999).

<sup>8</sup> Paul Rabinow et al., *Designs for an anthropology of the contemporary* (Durham and London: Duke University Press, 2008).

<sup>9</sup> Noortje Marres y Javier Lezaun, «Materials and devices of the public: an introduction», *Economy and Society* (Octubre 17, 2011): 1-21.

<sup>10</sup> Hirokazu Miyazaki, *The method of hope: anthropology, philosophy, and Fijian knowledge* (Stanford, California: Stanford University Press, 2004).

<sup>11</sup> Lorraine Daston, ed., *Things That Talk: Object Lessons from Art and Science* (New York: Zone Books, 2007).

<sup>12</sup> Angela N. H. Creager, Elizabeth Lunbeck, y M. Norton Wise, eds., *Science without laws: model systems, cases, exemplary narratives* (Durham and London: Duke University Press, 2007); Catharina Manchanda, *Models and prototypes* (St. Louis, Missouri: Mildred Lane Kemper Art Museum, 2006).

*Prototyping Cultures* examines the claims, affordances and purchase of the prototype in a number of social and historical contexts. The history of science, as well as anthropological studies of innovation and technology, can help us situate the rise of the prototyping paradigm in a useful comparative framework, appraising both its (alleged) political promises and sociological justice, but also its critical value. The technological promises of the prototype seem to have instaurated a new illusion of democracy: it has brought the worlds of objects, engineering, cultural practice and politics together in some new fertile assemblages.<sup>13</sup> It is therefore high time for social theory to take the prototype to task as both an epistemic object and a critical tool.

This special issue brings some of the leading scholars in the fields of anthropology, social studies of science and technology, and critical design thinking, in a theoretical and ethnographic dialogue that addresses central issues in contemporary social and political theory, for example:

*Openness / closure:* Prototypes are defined as dispositifs-in-the-making. They are open to scrutiny and re-adaptation; they are structurally unstable. They have not yet been 'black-boxed'. What, then, goes into black-boxing a technology: how are the proto and the type parenthesised with respect to each other? Does 'failure', for example, play a role in such parenthetical exercises? If so, what kind of failure, and whose?

*Engagement:* Because prototypes do not aim for stabilization, initiators of prototyping experiments are known for making room for non-experts in the process of production. How is the role of the public thus redefined in prototyping practices – as users, stakeholders, militants?<sup>14</sup>

*Durability:* If technology is society made durable, as Latour had it, what does it mean to make prototypes that are not durable? Is indeed the production of non-stable artefacts a way of destabilizing society? Perhaps a focus on prototyping cultures allows novel forms of social durability to emerge – new expressions of cultural, political and aesthetic materiality and critique. What is opened-up in a prototyping intervention?

*Organisation:* What forms of organisation does prototyping promote or allow? How are institutions to measure the failure/success of their interventions if they are no longer to be evaluated by their robustness or durability? What consequences may it have for state and public institutions (say, in the art, museum or scientific worlds) whose jobs may now be reconceived as process-facilitators rather than artefact-producers?

*Property:* Prototyping practices generate novel and challenging social claims and entitlements over the ownership and management of the prototype and/or derivative

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<sup>13</sup> Bruce Braun y Sarah J. Whatmore, *Political Matter: Technoscience, Democracy, and Public Life* (Minneapolis: University of Minnesota Press, 2010).

<sup>14</sup> On the role of public engagement in the making of technical democracies, see Michel Callon et al., *Acting in an Uncertain World: An Essay on Technical Democracy* (Cambridge, MA and London: The MIT Press, 2011).

products: Who owns something that is inappropriately finished – that apparently remains outside the proprietary?<sup>15</sup>

*Critique:* Is there scope for using prototyping as a tool for critical theory and praxis? What can prototyping do to/for theory?

We are very keen to have the collection considered for publication as a special issue by the Journal of Cultural Economy, for we believe our material addresses some of the fundamental questions of the journal's editorial agenda. As noted above, the figure of the prototype is an emblematic expression of how, in the words of the journal's own editorial statement, "social, cultural, technical, and economic networks and practices interact with one another in complex ways whose analysis requires the abandonment of attempts to differentiate these as belonging to ontologically separate realms". The prototype fares as an anthropological 'design' of the contemporary, in Paul Rabinow and George Marcus' terms, whose salience indexes not only emerging socio-technical and material relations, but a reflexive moment that double-backs on social-scientific enquiry itself.

### Abstracts

*Prototyping Cultures* offers the first comprehensive review and analysis of the rise of the 'prototype' as a new paradigm of knowledge-production. With contributions by leading historians and sociologists of science and technology, anthropologists, interaction design scholars, architects and political theorists, this special issue examines in depth the social transformations linking and truncating regimes of knowledge-production in the worlds of art, techno-science and politics.

\* Introduction. Alberto Corsin Jimenez, Spanish National Research Council: 'Prototyping theory'.

\* George Marcus, University of California, Irvine: 'Prototype Inventions Within and Alongside Contemporary Projects of Ethnographic Fieldwork: Third Spaces, Para-sites, Archives, Adjacencies, Ethnocharrettes, Studios, Paraethnography, Collateral and Lateral Knowledge, Oblique Critique, Installations...'

If the prototype is a version or draft of a product, far advanced in development, but still open to revision, experiment, and some rethinking, based, in part, on engagements with end users, then techniques, thinking, and experiments like prototyping have emerged as forms within and alongside an important and broad range of contemporary projects of ethnographic research, especially out of anthropology, whose professional culture of method was roiled by the Writing Culture debates of the 1980s. This chapter uses the idea of the prototype as a frame to survey and review a number of these projects, which seem to be situating and shaping fieldwork by real and imaginary forms that provide the affordances of prototyping.

\* Michael Guggenheim, Goldsmiths College, University of London: 'From Prototyping to Allotyping: The Invention of Change of Use and the Crisis of Building Types'.

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<sup>15</sup> A comprehensive account of the intellectual property debates today is found in Mario Biagioli, Peter Jaszi, y Martha Woodmansee, eds., *Making and unmaking intellectual property: creative production in legal and cultural perspective* (Chicago and London: The University of Chicago Press, 2011).

The chapter analyses the invention and the form of the discourse on building conversion as one particular instance of redefining what a technology is and how it operates. I describe a shift from expert defined closure to lay-based openness and tinkering as a shift from prototyping to allotyping: Since the early nineteen seventies change of use and building conversion have become a central and fashionable discourse among architects and architectural theorists. Before the nineteen seventies buildings were understood as technologies, as “society made durable”. The notion of building type was central to link a building to a given use. A bank was a bank, because architects applied existing templates, prototypes, to turn a building into a bank. In the 1970ies, suddenly buildings became – discursively, since building conversion always existed – quasi-technologies, or “buildings made flexible through society”: “Building type” no longer was a meaningful link between a building and its use. A bank should not stay a bank, but become a hotel, a theatre, or a flat, in short: an allotype. The chapter elucidate this central shift in thinking about buildings and reflects on the special case of allotyping buildings as quasi-technologies and how it continues to vex thinking about buildings.

\* Nerea Calvillo, C+ Arquitecto, and Javier Lezaun, University of Oxford: ‘Simulations and situations: on the experimental production of political atmospheres’.

Can political effects be generated in a laboratory? Or, rather, what sort of laboratory will allow the manufacture of political phenomena? This chapter analyzes a famous series of experiments directed by Kurt Lewin and Ronald Lippitt at the Iowa Child Welfare Research Station in the late 1930s. In what became a foundational moment for social psychology and experimental political theory, Lewin and Lippitt were able to generate ideal-typical examples of democratic, authoritarian, and laissez-faire ‘atmospheres’ or ‘social climates’ by manipulating the conditions of work-play of small groups of children, and arranging a particularly intense form of group observation. We re-examine the cinematographic record produced in the course of the experiments to understand better how the spatial constitution and material furnishing of the makeshift laboratory contributed to the generation of political effects. In particular, we are interested in understanding how what started as an effort to stage *simulations* of particular kinds of social order ended up producing tangible political *situations*.

\* James Leach, University of Aberdeen: ‘Choreographic Objects: contemporary dance, digital creations, and experimental forms of relation.’

Many successful contemporary dance companies in Europe have recently experimented with new ways of presenting their work utilizing digital media. In this paper I provide an analysis of the context in which these innovations are stimulated, focusing on the effort to demonstrate contemporary dance as a ‘knowledge producing’ endeavor, and offer an analysis of specific projects and outcomes utilising ‘exchange theory’. The approach allows a focus on the digital creations of dance companies as ‘prototypes’ of forms for relational engagement with audiences and the wider public to take. The analysis of things-in-the-making and things in circulation reveals how they are shaped by both dance practitioner’s views of themselves, their interests, and their desire to control perceptions, as well as responses and reactions to their circulation. Contemporary dance could be said to be re-inventing itself, in part, through these new forms of transaction and thus relation to others.

\* Alex Wilkie, Goldsmiths College, University of London: ‘Prototyping the prospects of obesity’.

The view that the ‘user’ is constructed, configured or scripted, as a sociotechnical assemblage can be read as a key insight of STS accounts of the design of technological prototypes, most notably computer and information systems. Moving away from such instrumental and singular accounts of users, this chapter explores the figuring of multiple ‘users’ as part of the development of a mobile health technology. Drawing on a six-month ethnographic study of designers working for a

multinational ICT manufacturer who deploy the principles and practices of User-Centered Design (UCD), the chapter discusses how multiple users resource the design and development of a mobile phone based daily exercise prototype (DEP) to promote everyday health and fitness routines and thereby address the international threat of obesity.

\* Alberto Corsin Jimenez and Adolfo Estalella, Spanish National Research Council: 'Prototyping relationships'.

If prototyping is no longer simply a modality of object-production but a contemporary expression of how certain social relationships invest in their own self-understanding and self-elicitation, then it remains to be explained how such relationships conceive their own conditions of possibility. If we are no longer prototyping artefacts but societies, what makes in practice a good prototypical society? We offer an ethnographic answer by way of a study of Medialab-Prado, a critical arts and technology centre in Madrid. The centre has a strong commitment to the production of digital arts and technology prototypes. Its staff often refer to the centre as a space dedicated to 'prototyping do-it-with-others (DIWO) forms of learning'. The prototype works therefore as a conduit or vehicle for the self-organisation of a community of practice and learning. The prototype as prototypical sociality.

### About the contributors

**Alberto Corsin Jimenez** is Senior Scientist at the Spanish National Research Council. He is the author of *Trompe l'oeil anthropology* (forthcoming, Berghahn) and editor of *Culture and Well-being: Anthropological Approaches to Freedom and Political Ethics* (Pluto 2008) and *The Anthropology of Organisations* (Ashgate 2007). His areas of interest lie in the history and anthropological theory of knowledge practices, and in particular their contemporary expression in science/management/public encounters.

**Nerea Calvillo** qualified as an architect at the Madrid School of Architecture (ETSAM 1999). That year she was awarded the Fulbright grant to follow a Masters degree course at Columbia University. She has worked in various practices, such as NO.MAD (Madrid 1999-2001) and FOA (London 2001-2003). Since 2004 she founded her own office C+, winning several national and international competitions. Her work and articles have been published in architecture magazines and general media. Specialized in new technologies as a design tool, her research projects focus on data visualization and cartographies have been developed in several international universities and new technologies centers, including her recent project *In the Air*: invisible cities are revealed through collaborative process and multidisciplinary teams, by sensing, describing, interacting and changing behavioural patterns of the existing urban environment. This work has been awarded the Poiesis Fellowship of New York University, and has been exhibited at the Museo de Arte Contemporáneo de Chile (Santiago de Chile), Laboral (Gijón) and the Canadian Centre of Architecture (Montreal), among others. She is Design Studio Professor at the Universidad Europea de Madrid and the Universidad de Alicante, curated the Media Facades Festival 2010 in Madrid and is currently part of the working group of El Ranchito, a co-curated art project of Matadero, Madrid.

**Adolfo Estalella** is an anthropologist and postdoctoral researcher at the Spanish National Research Council in Madrid. He is interested in the intersection of digital cultures with new forms of urban activism.

**Michael Guggenheim** is directing an ERC-funded project “Organising Disaster. Civil Protection and the Population” at the CSISP/the department of Sociology, Goldsmiths, which looks at how disaster experts conceive of the population. Previously, he has worked on change of use of buildings and how materiality and use interrelate. For his PhD he studied environmental experts. He also works with Bernd Kräftner and Judith Kröll on a project “In the Event of... Anticipatory and Participatory Politics of Emergency Provision”, where they attempt to build a qualitative laboratory for disaster and emergency provision forecasting. In 2006, they were curators of “die wahr/falsch inc.”, an exhibition on science and the public in Vienna. Most recently he has edited “Re-Shaping Cities: How Global Mobility Transforms Architecture and Urban Form”, Routledge, 2009 and “The Laws of Foreign Buildings: Flat Roofs and Minarets” in *Social and Legal Studies*, 2010.

**James Leach** is Professor of Anthropology at the University of Aberdeen. He has undertaken field research in Madang Province, Papua New Guinea, since 1993, publishing books on the land-person-creativity relation there (*Creative Land*, 2003), the ownership of land and knowledge arising in this context (*Rationales of Ownership*, 2004, edited with Lawrence Kalinoe), and Madang people’s knowledge and use of plants and the ownership of such knowledge (*Reite Plants*, 2010, with Porer Nombo). He has also published several articles on material culture, creativity, technology, collaboration, and knowledge exchange.

**Javier Lezaun** is the James Martin Lecturer in Science and Technology Governance at the Institute for Science, Innovation and Society, School of Anthropology, University of Oxford. He is currently directing the BioProperty research programme, which explores the emergence and contestation of property rights in the contemporary life sciences. His work has recently appeared in *Environment and Planning D, Economy and Society*, and *Social Studies of Science*.

**George E. Marcus** is Chancellor’s Professor of Anthropology at the University of California, Irvine, where he established a Center for Ethnography in 2005. He is interested especially in experiments and innovations in the classic forms of ethnographic research and writing as the significance and popularity of this methodological practice have increased. Collaboration and Design are two reference points in the application of ethnography in new spaces of inquiry.

**Alex Wilkie** is a Lecturer in Design and a Research Fellow in Sociology at Goldsmiths, University of London where he is a member of the Interaction Research Studio. His PhD thesis, *User-Assemblages In Design: An Ethnographic Study*, explores how the figure of the user is variously enacted in user-centered design as practiced in a multinational semiconductor manufacturer. Alex is currently working as part of a Research Councils UK funded Design and STS interdisciplinary engagement with local ‘energy communities’, preparing a book manuscript based on his PhD thesis as well as

preparing an edited volume entitled *Studio Studies: Ethnographies of Creative Production* with Ignacio Farias.

**Where the articles come from**

The articles were first given as papers at the 'Prototyping cultures: social experimentation, do-it-yourself science, and beta knowledges' conference organised by Alberto Corsín Jiménez and Adolfo Estalella at the Spanish National Research Council (Madrid) in November 2010.

In being reworked for this special issue we have introduced a number of changes to the original material. Some contributors (Javier Lezaún and Nerea Calvillo) have since been stimulated to stage novel interdisciplinary dialogues (between science studies and architectural practice) and will be submitting a whole new text based on their post-conference exchanges. Finally, the special issue will not be including talks given at the conference by Chris Kelty, Lucy Suchman and Fred Turner, although the imprint of our intellectual engagement during the conference, as well as the influence of their work, will be clearly visible throughout the volume.