

# Counterfactual Money

**Dr Austin Houldsworth**

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# Project Description

This body of research combines the development of a new speculative design method with a radical redesign of money, economics and value systems.

**Project Duration:**

February 2014 to December 2019

**Funder:**

£20000 from Barclaycard for preliminary research relating to the outputs.

£1000 from Longbridge Light Festival to develop 'We Currency' device.

£2000 from Nesta to develop 'The honour'.

£2000 from Eden Project to Develop 'The intergalactic estate agency'.

Contextual shot of 'Money incinerating payment organ' within a 'Walden Two' type setting

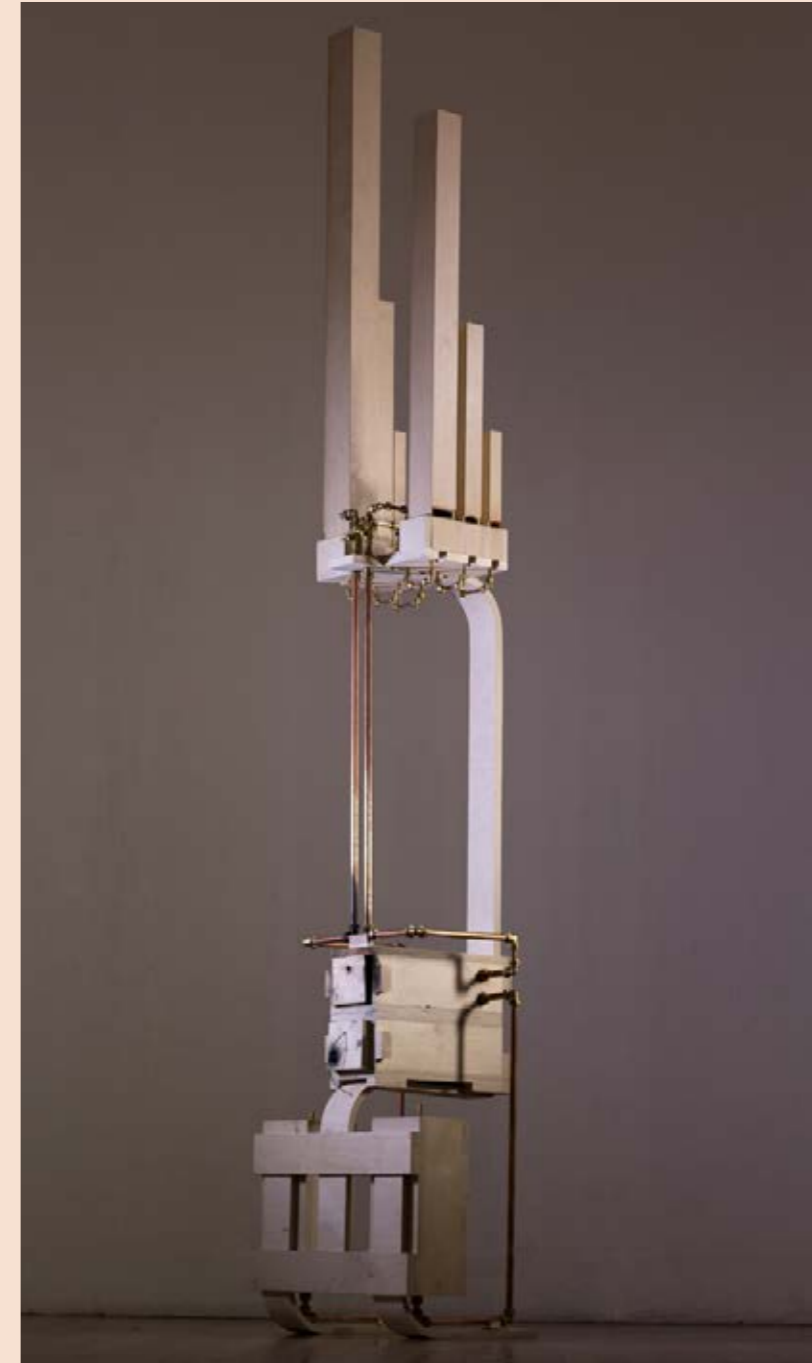
# Research Aims & Objectives

## Research Aims:

- The global fiat currency system, and most alternatives (including bitcoin) all share the same monetary principles, which can limit our ability to imagine genuinely new alternatives. The first aim of the work in this portfolio is to create radically different notions of money and value that challenge longstanding monetary related assumptions.

## Research Objectives:

- Generate - Develop a new generative design method (counterfactual design) that reframes the design process within alternative cultural contexts to resonate with the fundamentally altered form of money.
- Build - Create working prototypes of the alternative monetary artefacts, making the theory palpable and facilitating the communication of the notions to the public.
- Disseminate - Find platforms for public engagement; including exhibitions, blogs, conferences and talks.



Money incinerating payment organ 2014 - 2.5m x 0.5m x 0.5m  
(Bend Plywood forms, copper piping)

# Research Context

Market orientated products are designed to resonate with the current cultural context. When profit is the imperative, this makes sense, however if the aim is to design alternatives then the iterative nature of the design process combined with the ubiquity of market culture becomes an obstacle to the creation of genuinely new knowledge. This is especially true when the focus for redesign is money; as money is the life blood of the economy.

The issues surrounding the reliance on a singular type of global currency become apparent during economic crisis, exemplified by the 2008 bailouts packages required to keep society functioning. Moreover, the growing gap between rich and poor brings into question the monetary functions associated with the long-term store of wealth. Historically governmental legislation attempts to mitigate issues like these through policy or tax, but could redesigning money from its fundamental principles offer an alternative approach?

The field of speculative and critical design practice has led to projects that have proposed alternative monetary systems including Patrick Stevenson-Keating's 'Reciprociti Bank,' Daisy Ginsberg's Early Exit (Ginsberg, 2008) and Chris Woebken's A new relationship to money (Woebken, 2009). However, none have altered the fundamentals surrounding money, the outcomes of these early endeavours are often still contextualised within contemporary trends relating to payment technologies in the present. Even unbridled imaginings in science fiction either use money as a plot device or avoid it all together through the notion of 'utopia' as Batiz-Lazo highlights in his paper 'Case of the cashless society', "When a fictional society was cashless it was generally also a moneyless utopia" (Batiz-Lazo, 2014, p.11).

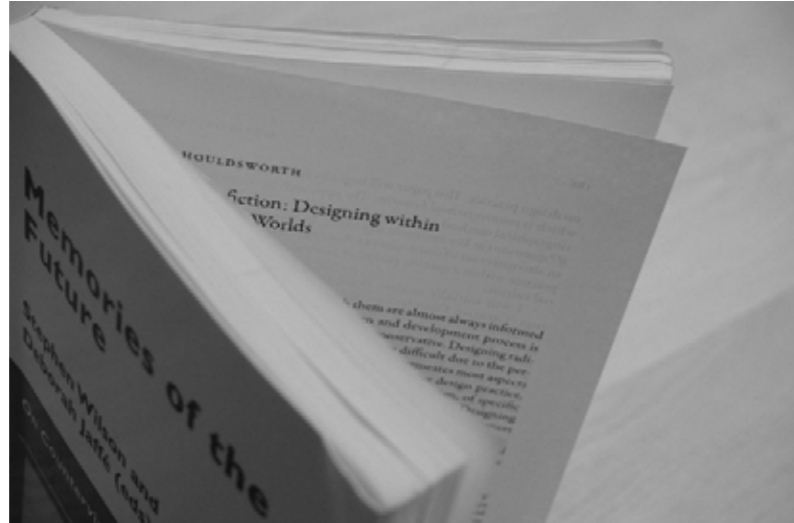
The speculative design method that I have designed ('Counterfactual Design', outlined in the book chapter of that name in 'Memories of the future,' edited by Stephen Wilson and Deborah Jaffé (2017)) is used in the Counterfactual Money research to utilise the moneyless but rich cultural contexts from social science

fiction, giving the opportunity to fundamentally alter the economic definition of money. Thus, three of the outputs presented in this portfolio act as palpable thought experiments which combine fundamentally altered economic definitions of money (medium of exchange, store of value and unit of account) with a resonant social context from science fiction – these projects reframe the general economic approach from defining money by its past, to looking at what money could become in the future, through the offering of radical redesigns.

Two other outputs in this portfolio offer new avenues for future exploration of money and value. 'The Honour' commissioned by Nesta, imagines how a failing electronic payment system might lead to a new bottom up monetary system to facilitate local trade. And 'The Intergalactic Estate Agency' leverages our understanding of value against climate change, by selling property on the 'intergalactic' market.

# Research Methods & Process

'Counterfactual: Designing within Alternative Worlds' a chapter in 'Memories of the Future: On Countervision.' Outlines the speculative design method used to facilitate the three projects right.



## Counterfactual Designs (projects 1 to 3):

'The Counterfactual Design Method'

1. *Identify – fundamental aspects of social technology (in this case the longstanding economic definition of money)*
2. *Alter – Generalising the fundamental functions by switching off one of the three main functions. (Medium of exchange, store of value and unit of account)*
3. *Context - find an appropriate social science fiction novel, unpack the culture into beliefs, social structures and artefacts. Determine if it would resonate with the altered monetary function.*
4. *Ideate – Step into this social science fiction world to design the monetary system and artefacts.*
5. *Build – Develop ideas into functioning prototypes.*

What follows in this section is a detailed description of five artefactual outputs produced in this research project using the counterfactual design method.

Money incinerating payment organ  
2014 - 2.5m x 0.5m x 0.5m (Bend  
Plywood forms, copper piping)



## 1. Counterfactual: Walden Note Money:

Altered function: 'Store of value'

Cultural context: Walden Two by B.F. Skinner. First published in 1948.  
Characteristics context: Egalitarian society, planned economy, behaviourally conditioned population.

This artefactual output presents a payment system that challenges the established monetary function of 'a store of value.' Creating a new method of exchange that encourages people to actively destroy their money during a transaction. The process positively reinforces this behaviour through the creation of music, produced from the burning money within the transaction machine – these 'Walden notes' also signal the economic activity to the managers and planners within Walden Two.

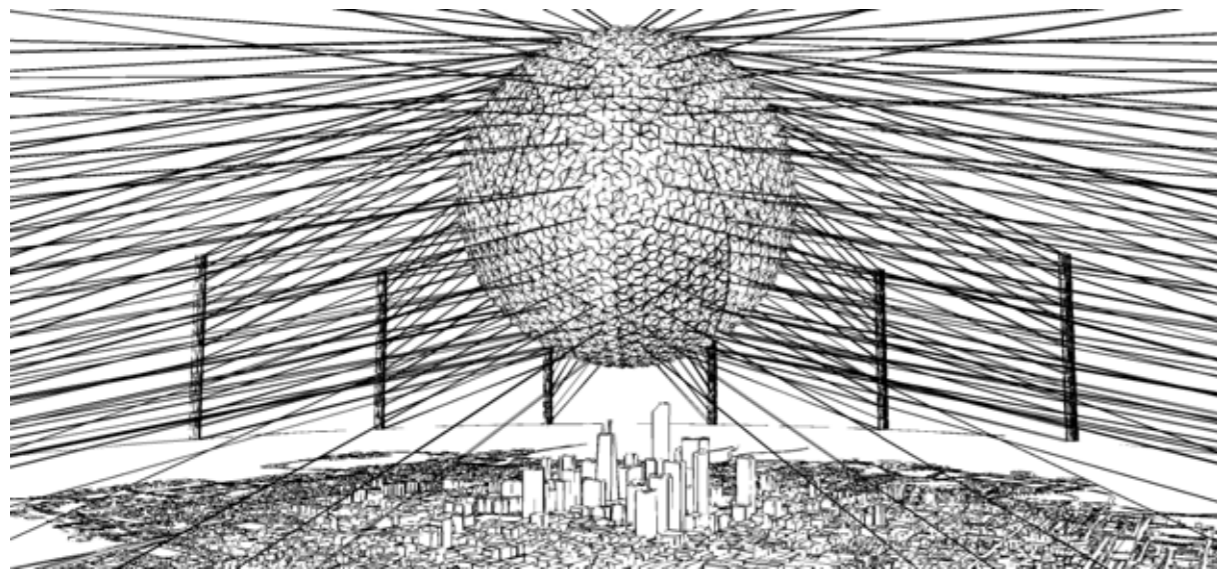
Bringing the ideas into reality required creating small test rigs, making sure the various elements functioned. Below is a test rig for the smoke generating coinage. When the coinage is ignited the smoke rises through the pipes and makes the denominations equal to a specific note: C = 1, D = 2 E = 3 and so forth.

**2. Counterfactual:**  
**We Currency:**

Altered function: 'Medium of Exchange'  
Cultural context: WE by Yevgeny Zamyatin. First published in 1924.  
Characteristics of context: Totalitarian society, planned economy and society, highly regulated.

The highly planned society in WE, means trade is redundant and so to the 'medium of exchange' which facilitates trade. In WE money is a cultural 'store of value' and duty defined 'unit of account' represented by a huge sphere. Each section represents a citizen. When all sections are together, citizens are performing their duties as intended. If a worker deviates from his duties, his section of the sphere slowly moves away from the collective and access to the city is slowly diminished.

The initial concept was reduced in size and made palpable through a series of practical test rigs. The plywood and scaffolding frame supported a spherical form that was actuated by pneumatics and programmed via a microcontroller – creating an immersive experience for spectators at Longbridge Light Festival.



Visualisation of WE currency device above the city.



We Currency device 2014 - 3m x 3m x 3m  
(Scaffolding, wooden forms, pneumatics, electronic control systems)

**3. Counterfactual:  
Wealth Beyond Big Brother:**

Altered functions: 'Unit of account;  
Cultural context: 'disputed territories' in Nineteen Eighty-Four  
by George Orwell. First published 8 June 1949.  
Characteristics of context: Anarchistic society, ravaged by waring  
super states.

In the anarchistic 'disputed territories' from the world of Nineteen  
Eighty-Four, people hold a scepticism of institutional control,  
rendering the 'unit of account' function redundant. No trusted  
financial institution has ever been established. The payment system  
here serves as both personal protection and a medium of exchange.  
Embodying two ideas of value; on the one hand wealth and on the  
other life. Greed is tempered by the penultimate meaning of loss.  
As a result, a transaction can take days, each party explains in great  
detail why the goods are required, or the payment needed.

Designing and fabricating this payment device was again an iterative  
process. Below is an initial prototype to test the form and mechanics  
of the payment gun, alongside a working SLA printed bullet. The final  
artefact above is printed SLA, electroformed with copper, zinc and a  
black passivate.



Payment Gun 2015  
(Materials: 3d Printed SLA, electroformed with copper / zinc passivate, turned blackwood)



**Additional explorations of value:**

**1. The Intergalactic Estate Agency:**

The Intergalactic Estate Agency was a participatory installation created for the Eden Project, which enabled the audience to create and record a sales message for transmission on the intergalactic market. The work contextualises the challenges of climate change through a shamelessly self-interested perspective of retaining value prior to sale.



Morse Code Messaging Machine 2019  
(Electro-mechanical design; Birch Ply, Gearing, Aluminium plate)

**2. The Honour:**

The Honour was commissioned by Nesta, for a project looking into community resilience in emergencies.

The project proposed a community led local currency system, formed as the mainstream electronic system broke down.



Coin Stamp & plastic bottle top coinage  
(Acid & electrolysis etched mild steel)

# Research Outcomes & Dissemination

<b>Interactive Artefacts:</b>	2019	Morse Code Messaging Machine (Electro-mechanical design; Birch Ply, Gearing, Aluminium plate) <a href="https://www.austinhouldsworth.co.uk/#/intergalactic-estate-agency/">https://www.austinhouldsworth.co.uk/#/intergalactic-estate-agency/</a>
		Coin Stamp & plastic bottle top coinage (Acid & electrolysis etched mild steal) <a href="https://www.austinhouldsworth.co.uk/#/new-gallery-4/">https://www.austinhouldsworth.co.uk/#/new-gallery-4/</a>
	2015	Payment Gun 2015 (Materials: 3d Printed SLA, electroformed with zinc, turned blackwood) <a href="https://www.austinhouldsworth.co.uk/#/799904201174/">https://www.austinhouldsworth.co.uk/#/799904201174/</a>
	2014	Money incinerating payment organ 2014 - 2.5m x 0.5m x 0.5m (Bend Plywood forms, copper piping) <a href="https://www.austinhouldsworth.co.uk/#/vii/">https://www.austinhouldsworth.co.uk/#/vii/</a>
		We Currency device 2014 - 3m x 3m x 3m (Scaffolding, wooden forms, pneumatics, control systems) <a href="https://www.austinhouldsworth.co.uk/#/iii/">https://www.austinhouldsworth.co.uk/#/iii/</a>
<b>Video work:</b>	2014	Depiction of Walden Note Money machine in operation <a href="https://vimeo.com/86508725">https://vimeo.com/86508725</a>
<b>Exhibitions:</b>	2020	All Good Things, Interactive Arts Final Show - Benzie Vertical Gallery, Manchester School of Art, Oxford Road, Manchester, United Kingdom: Duration: 5 Mar 2020 — 14 Mar 2020
	2019	Invisible Worlds – The Lab in the Core, The Eden Project, Bodelva, Cornwall, United Kingdom: Duration: 24 Oct 2019 — 1 Nov 2019 <a href="https://www.edenproject.com/visit/whats-here/invisible-worlds-exhibition/invisible-worlds-art-residency-austin-houldsworth">https://www.edenproject.com/visit/whats-here/invisible-worlds-exhibition/invisible-worlds-art-residency-austin-houldsworth</a>
	2017	V&A Presents: Quids In - The Paul and Jill Ruddock Gallery, the Victoria and Albert Museum, London, United Kingdom Duration: 31 Mar 2017 — 31 Mar 2017

<b>Exhibitions:</b>	2014	In the Window - Airspace Gallery, Stoke-on-Trent, United Kingdom Duration: 12 Jun 2014 — 26 Jun 2014 <a href="https://www.airspacegallery.org/index.php/2020/project_entry/walden_note_money_austin_houldsworth">https://www.airspacegallery.org/index.php/2020/project_entry/walden_note_money_austin_houldsworth</a>
		Longbridge light festival – Longbridge, Birmingham, United Kingdom <a href="https://www.lpap.info/new-blog/austin-houldsworth">https://www.lpap.info/new-blog/austin-houldsworth</a>
<b>Book Chapter:</b>	2017	Houldsworth, A., 28 Apr 2017, Memories of the Future: On Counterintuition. Wilson, S. & Jaffé, D. (eds.). Peter Lang Publishing Group, p. 185-204 10 p. (Cultural Memories; vol. 6).
<b>Conference Papers:</b>	2016	Moneylab – Pakhuis de Zwijger, Piet Heinkade 179, 1019 HC, Amsterdam Duration: 1st Dec 2016 – 2nd Dec 2016 <a href="https://networkcultures.org/moneylab/program-3/conference-sessions/">https://networkcultures.org/moneylab/program-3/conference-sessions/</a>
	2014	Motf Conference – The Institute of Modern Languages, Senate House, University of London, Malet St, Bloomsbury, London Duration: 2nd May 2014 – 3rd May 2014 <a href="https://www.arts.ac.uk/_data/assets/pdf_file/0020/24680/Memories-of-the-Future-conference-abstracts-and-speaker-bios.pdf">https://www.arts.ac.uk/_data/assets/pdf_file/0020/24680/Memories-of-the-Future-conference-abstracts-and-speaker-bios.pdf</a>
<b>Workshop:</b>	2014	Scrapheap Challenge for Everyday Security – Royal Geographical Society Conference, 1 Kensington Gore, South Kensington. Duration: 27 Aug 2014 — 27 Aug 2014

<b>Talks:</b>	2020	Economia – The Limited Edition Conference – Online London Duration: 10/09/20 <a href="http://thinkeconomia.com/conference/">http://thinkeconomia.com/conference/</a>
	2018	Art after money, money after art - Furtherfield, The McKenzie Pavilion, Finsbury Park, London Duration: 09/12/2018 <a href="https://www.furtherfield.org/art-after-money-money-after-art/">https://www.furtherfield.org/art-after-money-money-after-art/</a>
	2016	FinTech IT day - Industriens Hus, H.C. Andersens Boulevard 18, 1787 København V Duration: 13th Sept 2016 – 14th Sept 2016 <a href="https://www.youtube.com/watch?v=b_GTSMKb7Qw">https://www.youtube.com/watch?v=b_GTSMKb7Qw</a>
<b>Awards:</b>	2014	Core77 Notable Award for the project 'Walden Note-money (A counterfactual design)' <a href="https://designawards.core77.com/2014/recipients/walden-note-money-a-counterfactual-design/index.html">https://designawards.core77.com/2014/recipients/walden-note-money-a-counterfactual-design/index.html</a>

(Right) 'The Chancel', Gallery 50B, Medieval & Renaissance Galleries, V&A.



# Conclusion

Money like any tool, shapes what can be built. Money enables and disables certain human behaviours and thus helps shapes society. But as the global fiat currency system is ubiquitous, only one type of money is shaping our world. Bernard Lietaer points out 'Money is like an iron ring we've put through our noses. We've forgotten that we designed it, and it's now leading us around' (Lietaer, 1997). The outputs in this portfolio acknowledge the existing relationship between money and society, however the counterfactual design method offers a tool to escape our singular monetary monopoly through the altering of its foundational principles.

In the shadow of the 2008 economic crash and 10 years of stagnation, radically new monetary ideas are needed to initiate new practical developments. To this aim, the work here has had impact; shown at the V&A 'quids in' exhibition, Longbridge light festival and many talks. It has won a Core77 award and been reviewed on We-make-money-not-art and recently referenced by academics in books like 'Art after money. Money after art' by Max Haiven and 'Economic Science fictions' by William Davies. Also new research projects that are part of my ongoing research exploring value have been commissioned by the Eden Project and Nesta.

**Output Type:**

Original artistic works, creative body of enquiry,  
audio visual artefact, contribution to collaborative  
group exhibitions, chapters in edited books,  
conference contributions